Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information	**Staff Assigned Case No.:**

Project Name: 947 Tahoe Condominium

Project Description: The project involves the development of 40 new residential condominiums and one commercial condominium on an approximately two-acre site.

Project Address: 941 and 947 Tahoe Boulevard (SR 28)

Project Area (acres or square feet): 2 acres

Project Location (with point of reference to major cross streets **AND** area locator):

Corner of Tahoe Blvd and Southwood Blvd

Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
132-231-09	1.389		
132-231-10	0.598		

Indicate any previous Washoe County approvals associated with this application: Case No.(s). SPW2-7-96; WDCA22-0002

Applicant Information (attach additional sheets if necessary)

Property Owner:		**Professional Consultant:**	
Name: PALCAP FFIF TAHOE 1, LLP		Name: NCE	
Address: 940 Southwood Blvd		Address: PO Box 1760	
Incline Village, NV	Zip: 89451	Zephyr Cove, NV	Zip: 89448
Phone: 469.233.2260	Fax:	Phone: 775-588-2505	Fax:
Email: cbutler@palominocap.com		Email: mlefrancois@ncenet.com	
Cell: 214.269.3404	Other:	Cell: 530-386-2772	Other:
Contact Person: Chuck Butler		Contact Person: Mike Lefrancois	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name: Same as Owner		Name: Feldman Thiel, LLP	
Address:		Address: PO Box 1309	
	Zip:	Zephyr Cove, NV	Zip: 89448
Phone:	Fax:	Phone: 775-580-7431	Fax:
Email:		Email: kara@fmttahoe.com	
Cell:	Other:	Cell: 530-545-3522	Other:
Contact Person:		Contact Person: Kara Thiel	

For Office Use Only

Date Received:	Initial:	Planning Area:
County Commission District:		Master Plan Designation(s):
CAB(s):		Regulatory Zoning(s):

Tentative Subdivision Map Application
Supplemental Information

(All required information may be separately attached)

1. What is the location (address or distance and direction from nearest intersection)?

941 AND 947 TAHOE BLVD

2. What is the subdivision name (proposed name must not duplicate the name of any existing subdivision)?

947 TAHOE CONDOMINIUM

3. Density and lot design:

a. Acreage of project site	1.99 Acres
b. Total number of lots	1 lot / 41 condominium units
c. Dwelling units per acre	20 units/acre
d. Minimum and maximum area of proposed lots	condominium unit size: 925 sf min. - 4,425 sf max
e. Minimum width of proposed lots	n/a
f. Average lot size	n/a

4. What utility company or organization will provide services to the development:

a. Sewer Service	IVGID
b. Electrical Service	NV ENERGY
c. Telephone Service	AT&T
d. LPG or Natural Gas Service	SOUTHWEST GAS
e. Solid Waste Disposal Service	IVGID
f. Cable Television Service	SPECTRUM
g. Water Service	IVGID

5. For common open space subdivisions (Article 408), please answer the following:

   a. Acreage of common open space:

   n/a

   b. What development constraints are within the development and how many acres are designated slope, wetlands, faults, springs, and/or ridgelines:

   NONE

   c. Range of lot sizes (include minimum and maximum lot size):

   n/a

d. Proposed yard setbacks if different from standard:

N/A

e. Justification for setback reduction or increase, if requested:

N/A

f. Identify all proposed non-residential uses:

N/A

g. Improvements proposed for the common open space:

lawn activity areas, spa, grills, and seating areas

h. Describe or show on the tentative map any public or private trail systems within common open space of the development:

N/A

i. Describe the connectivity of the proposed trail system with existing trails or open space adjacent to or near the property:

N/A

j. If there are ridgelines on the property, how are they protected from development?

N/A

k. Will fencing be allowed on lot lines or restricted? If so, how?

N/A

l. Identify the party responsible for maintenance of the common open space:

Homeowner's Association

6. Is the project adjacent to public lands or impacted by "Presumed Public Roads" as shown on the adopted April 27, 1999 Presumed Public Roads (see Washoe County Engineering website at http://www.washoecounty.us/pubworks/engineering.htm). If so, how is access to those features provided?

No

7. Is the parcel within the Truckee Meadows Service Area?

❑ Yes	■ No

8. Is the parcel within the Cooperative Planning Area as defined by the Regional Plan?

■ Yes	❑ No	If yes, within what city? INCLINE VILLAGE

9. Has an archeological survey been reviewed and approved by SHPO on the property? If yes, what were the findings?

No

10. Indicate the type and quantity of water rights the application has or proposes to have available:

a. Permit #	-	acre-feet per year	
b. Certificate #	-	acre-feet per year	
¤ c. Surface Claim #	-	acre-feet per year	
d. Other #	-	acre-feet per year	

a. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

Credit will be given for water rights associated with the previous restaurant and service station uses. The balance, if any, required to serve the project will be purchased from IVGID.

11. Describe the aspects of the tentative subdivision that contribute to energy conservation:

Triple paned glass in many windows, high efficiency radiant heating, electrical vehicle charging stations, bike room

12. Is the subject property in an area identified by Planning and Building as potentially containing rare or endangered plants and/or animals, critical breeding habitat, migration routes or winter range? If so, please list the species and describe what mitigation measures will be taken to prevent adverse impacts to the species:

No

13. If private roads are proposed, will the community be gated? If so, is a public trail system easement provided through the subdivision?

N/A

14. Are there any applicable policies of the adopted area plan in which the project is located that require compliance? If so, which policies and how does the project comply?

Policies T2-2 through T2-5: The project incorporates on-site bicycle storage and parking and the site is fronted by existing pedestrian and bike paths and is close to parks, schools, a golf course and other services. Policies T3-1 and -2: Access on 28 is for emergencies only. Policy T4-1: The site driveway intersections and SR 28/Village operate at acceptable LOS with the project. LU2-9: The development is a single-family dwelling airspace condominium and commercial space mixed-use project.

15. Are there any applicable area plan modifiers in the Development Code in which the project is located that require compliance? If so, which modifiers and how does the project comply?

Section 110.220.35, .145 and .150 apply to the Incline Village Commercial Regulatory Zone in which the project is located. The project complies with the applicable height, density, permissible use and land coverage standards.

16. Will the project be completed in one phase or is phasing planned? If so, please provide that phasing plan:

One phase

17. Is the project subject to Article 424, Hillside Development? If yes, please address all requirements of the Hillside Ordinance in a separate set of attachments and maps.

❑ Yes	■ No	If yes, include a separate set of attachments and maps.

18. Is the project subject to Article 418, Significant Hydrologic Resources? If yes, please address Special Review Considerations within Section 110.418.30 in a separate attachment.

❑ Yes	■ No	If yes, include separate attachments.

Grading

Please complete the following additional questions if the project anticipates grading that involves: (1) Disturbed area exceeding twenty-five thousand (25,000) square feet not covered by streets, buildings and landscaping; (2) More than one thousand (1,000) cubic yards of earth to be imported and placed as fill in a special flood hazard area; (3) More than five thousand (5,000) cubic yards of earth to be imported and placed as fill; (4) More than one thousand (1,000) cubic yards to be excavated, whether or not the earth will be exported from the property; or (5) If a permanent earthen structure will be established over four and one-half (4.5) feet high:

19. How many cubic yards of material are you proposing to excavate on site?

19,098 CY excavation

20. How many cubic yards of material are you exporting or importing? If exporting of material is anticipated, where will the material be sent? If the disposal site is within unincorporated Washoe County, what measures will be taken for erosion control and revegetation at the site? If none, how are you balancing the work on-site?

18,325 export - out of Tahoe Basin

21. Can the disturbed area be seen from off-site? If yes, from which directions, and which properties or roadways? What measures will be taken to mitigate their impacts?

Visible from SR28. Disturbed areas to be landscaped or restored per TRPA.

22. What is the slope (Horizontal/Vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

3:1 max slopes to be landscaped or restored per TRPA

23. Are you planning any berms and, if so, how tall is the berm at its highest? How will it be stabilized and/or revegetated?

No berms

24. Are retaining walls going to be required? If so, how high will the walls be, will there be multiple walls with intervening terracing, and what is the wall construction (i.e. rockery, concrete, timber, manufactured block)? How will the visual impacts be mitigated?

8.5' max high wall at driveway. Concrete proposed. Wall is below sight line from SR28.

25. Will the grading proposed require removal of any trees? If so, what species, how many, and of what size?

45 total trees to be removed. Summary on Sheet C2

26. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

Mulch of all disturbed areas as required of TRPA; Native pine needles or wood chips.

27. How are you providing temporary irrigation to the disturbed area?

irrigation in right-of-way areas not proposed

28. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

No

Tahoe Basin

Please complete the following questions if the project is within the Tahoe Basin:

29. Who is the Tahoe Regional Planning Agency (TRPA) project planner and what is his/her TRPA extension?

Bridget Cornell, bcornell@trpa.gov, 775.589.5218

30. Is the project within a ~~Community Plan (CP) area~~? AREA PLAN:

❑ Yes	❑ No If yes, which CP? INCLINE VILLAGE COMMERCIAL REG ZONE SPECIAL AREA 1

31. State how you are addressing the goals and policies of the Community Plan for each of the following sections:

a. Land Use:

Multiple-family dwellings are permissible as an allowed use in the IVCRZ SA 1 at a minimum and maximum density of 15 and 25 units/acre, respectively. For the two-acre site, the minimum and maximum densities are 30 units and 50 units, respectively. At 40 units, the project complies with the applicable density standards. The MFD-commercial mixed-use project can be subdivided into 40 airspace condos and a commercial condo since single-family dwelling condos are an allowed use in SA 1 when part of a mixed-use project.

b. Transportation:

The project incorporates on-site bicycle storage and parking and the site is fronted by existing pedestrian and bike paths. This will reduce reliance on the automobile.

c. Conservation:

The project is located in high capability land. Existing land coverage banked onsite will be used to support the project. Additional land coverage, in the form of existing coverage, will be transferred from elsewhere in the Region to the project, which is located in a Town Center. Air quality impacts will be mitigated through payment of the applicable fee. Scenic impacts will be mitigated through the use of earth tone colors, natural materials and landscape screening

d. Recreation:

The project incorporates on-site bicycle storage and parking and the site is fronted by existing pedestrian and bike paths and is close to parks, schools, a golf course and other services

e. Public Services:

Significant growth is not anticipated under this area plan. As a result, the plan envisions maintaining existing service levels. No major facility expansions or relocations are envisioned.

32. Identify where the development rights for the proposed project will come from:

33. Will this project remove or replace existing housing?

❑ Yes	■ No	If yes, how many units?

34. How many residential allocations will the developer request from Washoe County?
No residential allocations will be requested. However, an allocation of 1,800 sf of CFA will be requested from the Area Plan's development rights pool for conversion to 6 RUUs.

35. Describe how the landscape plans conform to the Incline Village General Improvement District landscaping requirements:

Limited turf area per ordinance; native/adaptive species

Request to Reserve New Street Name(s)

The Applicant is responsible for all sign costs.

Applicant Information

Name: PALCAP FFIF TAHOE1, LLS

Address: 940 Southwood Blvd

941 AND 947 TAHOE BLVD

Phone : _____ Fax: _____

Private Citizen Agency/Organization

Street Name Requests

(No more than 14 letters or 15 if there is an "i" in the name. Attach extra sheet if necessary.)

NONE REQUESTED	

If final recordation has not occurred within one (1) year, it is necessary to submit a written request for extension to the coordinator prior to the expiration date of the original

Location

Project Name: 947 Tahoe Condominium

Reno Sparks Washoe County

Parcel Numbers: _____

Subdivision Parcelization Private Street

Please attach maps, petitions and supplementary information.

Approved: _____ Date: _____

Regional Street Naming Coordinator

Except where noted

Denied: _____ Date: _____

Regional Street Naming Coordinator

Washoe County Geographic Information Services

1001 E. Ninth Street

Reno, NV 89512-2845

Phone: (775) 328-2325 - Fax: (775) 328-6133

Nine 47 Tahoe Public Outreach

At least eight (8) public meetings have been held in the last year, three (3) more are scheduled in the next two months and the Planning Commission will hold a public hearing on the TSM in May 2023.

A neighborhood meeting was held on January 24, 2022, regarding the proposed Tentative Map. The TRPA Governing Board (GB) approved the Project on June 22, 2022, at a public meeting. Next, PAL CAP held a community workshop on August 22, 2022, on the Project and Amendment with more than 30 people in attendance. A public hearing on the Amendment was held at the Planning Commission (PC) on Nov. 1, 2022, and many of the comments received were on the Project. A public hearing was held at the Board of County Commissioners (BOCC) on December 13, 2022, for the first reading of the Amendment and, again, the Project was the subject of numerous public comments. TRPA made a presentation on the Amendment to the Incline Village / Crystal Bay CAB on January 3, 2023, with many people in attendance. A public hearing was held at the BOCC on January 17, 2023, for the second reading of the Amendment, which was unanimously approved. At the time of the BOCC's approval of the Amendment, more than 80 letters/emails had been submitted and dozens of people spoke during public comment about the Project. A public hearing was held on the Amendment at the February 22, 2023, TRPA Regional Plan Implementation Committee (RPIC) meeting with more than 70 public letters submitted, and several members of the public participated in the meeting. Finally, Randy Fleisher of PAL CAP has met individually with dozens of community members about the Project and reached out to Rotary Club members, business association members and non-profits groups.

Future public hearings on the Amendment, which will undoubtedly garner public comments on the Project, will be held March 8, 2023, at the TRPA Advisory Planning Commission meeting, March 22, 2023, RPIC meeting and April 26, 2023, at the TRPA GB meeting. Finally, the public will have another opportunity to comment on the Project during the PC meeting on the Project's Tentative Subdivision Map.

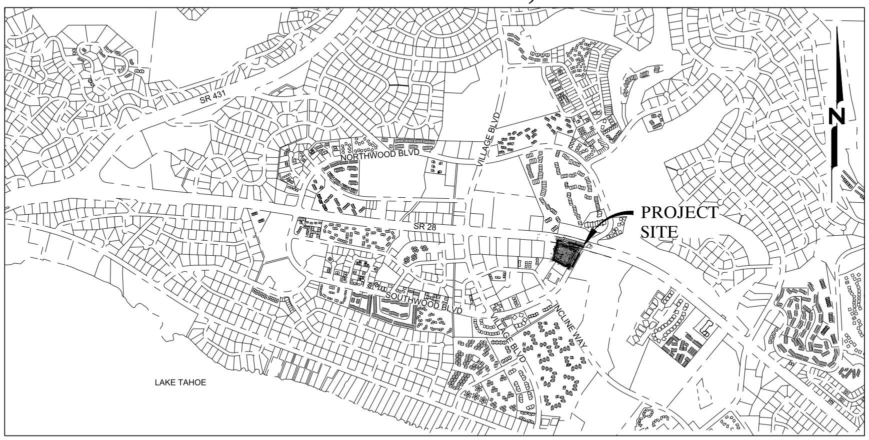
TENTATIVE MAP PLANS
FOR
947 TAHOE
INCLINE VILLAGE
WASHOE COUNTY, NEVADA

APPLICANT/OWNER/DEVELOPER

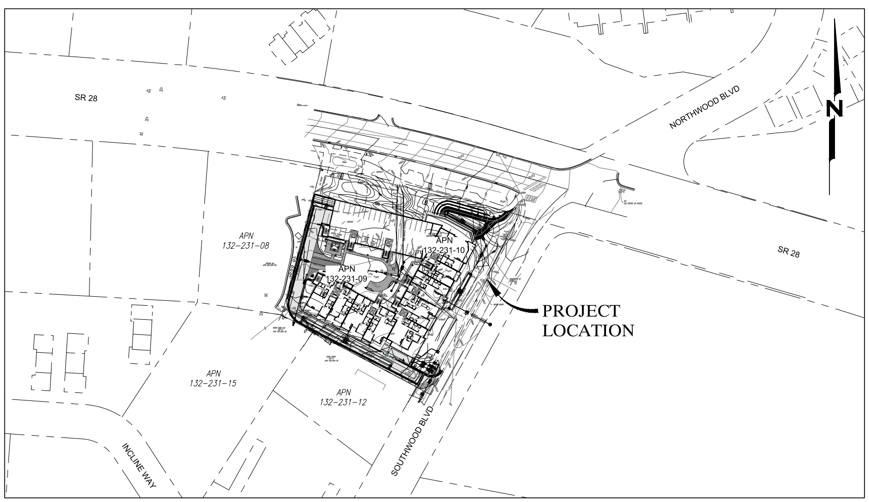
PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE. 101
INCLINE VILLAGE, NEVADA 89451
CHUCK BUTLER
Ph: (469) 233-2260
cbutler@palominocap.com

ENGINEER

NCE
1885 S. Arlington Ave. Suite 111
Reno, Nevada 89509
(775) 329-4955 * Fax (775) 329-5098



VICINITY MAP
SCALE: 1"=900'



SITE PLAN
SCALE: 1"=100'

SHEET INDEX

SHEET NO.	DRAWING NO.	DESCRIPTION
1	T1	TITLE SHEET
2	C1	NOTES, LEGEND & ABBREVIATIONS
3	C2	BMP-DEMO PLAN
4	C3	GRADING AND DRAINAGE
5	C4	DRIVEWAY ACCESS PROFILE
6	C4A	SITE CROSS SECTIONS
7	C5	UTILITY PLAN
8	C6	SANITARY SEWER PROFILE
9	D1	BMP DETAILS
10	D2	DETAILS
11	D3	DETAILS
12	D4	STORM DRAIN DETAILS
13	D5	SANITARY SEWER DETAILS
14	D6	WATER DETAILS
15	D7	DETAILS
16	TM1	TENTATIVE SUBDIVISION MAP
17	TM2	TENTATIVE SUBDIVISION MAP
18	TM3	TENTATIVE SUBDIVISION MAP
19	TM4	TENTATIVE SUBDIVISION MAP
20	TM5	TENTATIVE SUBDIVISION MAP
21	L1.0	PLANTING PLAN
22	L2.0	SITE LIGHTING PLAN
23	L3.0	SNOW MANAGEMENT PLAN

PRELIMINARY
FOR REVIEW
NOT FOR CONSTRUCTION
DATE: 01-31-2023

ENGINEER'S STATEMENT

THESE PLANS (SHEETS T1 THROUGH L3.0) HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTABLE ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, COUNTY ORDINANCES, AND CODES. IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND COUNTY CODES, THE COUNTY CODES SHALL PREVAIL.

MICHAEL LEFRANCOIS P.E. #20115

NCE
1885 S. Arlington Ave. Suite 111
Reno, Nevada 89509
(775) 329-4955 * Fax (775) 329-5098

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

SHEET TITLE

TITLE SHEET

DRAWING

T1

GENERAL NOTES

1. STAGING AREAS ARE TO BE COORDINATED BETWEEN THE CONTRACTOR AND COUNTY AND APPROVED BY TRPA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE STAGING AREA, INCLUDING PLACEMENT AND MAINTENANCE OF BMPS, AS DESCRIBED IN NOTE NO. 2.
2. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL INSTALL TEMPORARY BMP MEASURES AT LOCATIONS WHERE NEEDED TO CONTROL EROSION AND WATER POLLUTION DURING THE CONSTRUCTION OF THE PROJECT. THE BMP MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED IN A FUNCTIONAL CONDITION FOR THE DURATION OF THE CONSTRUCTION. SILT FENCE IS REQUIRED AT ALL CROSS DRAIN OUTLETS. SILT FENCE WILL BE REQUIRED AT OTHER LOCATIONS AS SHOWN ON THE DRAWINGS OR STAKED IN THE FIELD BY THE COUNTY. ALL EROSION CONTROL MEASURES SHALL MEET OR EXCEED TRPA REQUIREMENTS.
3. ALL EXISTING VEGETATION SHALL BE PRESERVED UNLESS SPECIFICALLY IDENTIFIED BY THE COUNTY FOR REMOVAL. BMP'S TO PROTECT VEGETATION SHALL BE INSTALLED BY THE CONTRACTOR IF REQUIRED BY TRPA.
4. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. WHERE EXCAVATION IS NECESSARY, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AND ALL AFFECTED UTILITY COMPANIES TO LOCATE ALL BURIED UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR RELOCATION OF UTILITIES AS REQUIRED BY THE WORK. THE UTILITY COMPANIES WILL PERFORM ALL RELOCATION WORK AT NO COST TO THE CONTRACTOR, PROVIDED THAT NO DAMAGE TO UTILITIES HAS OCCURRED DUE TO CONTRACTOR NEGLIGENCE. EXISTING STORM DRAIN, GAS, WATER AND SEWER LOCATIONS, MATERIALS AND SIZE ARE BASED ON A SEARCH OF EXISTING RECORDS. WHENEVER CONNECTIONS TO OR CLEARANCE FROM STORM DRAIN PIPE IS REQUIRED, THE CONTRACTOR SHALL POTHOLE TO VERIFY THE LOCATION, SIZE AND MATERIAL OF THE PIPE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND AND PRIOR TO CONDUCTING ANY RESOLUTION.
5. ASPHALT SHOULDER REPLACEMENT SHALL INCORPORATE A 4% ±1% CROSS SLOPE OR AS DIRECTED BY THE COUNTY BETWEEN THE SAWCUT AND THE NEW ROADSIDE TREATMENT. NEW ROADSIDE FLOW CONVEYANCES SHALL INCORPORATE SUCH GRADE AS NECESSARY TO MAINTAIN FLOW IN THE PRESENT DIRECTION, WITHOUT PONDING OR BREAKOUTS.
6. ANY DAMAGE DONE BY THE CONTRACTOR OR HIS SUBCONTRACTORS TO PRIVATE PROPERTY AND/OR OUTSIDE THE NOTED LIMITS OF WORK IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND/OR HIS SUBCONTRACTORS.
7. FOR TEMPORARY BMPs REFER TO SHEET D1.
8. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE PROJECT DRAWINGS, SPECIAL PROVISIONS, AND "STANDARD SPECIFICATIONS" FOR THIS PROJECT. THE "STANDARD SPECIFICATIONS" FOR THIS PROJECT SHALL BE THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012, (REVISION 8 – 10/19/18) SPONSORED AND DISTRIBUTED BY REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY, CARSON CITY, CHURCHILL COUNTY, CITY OF SPARKS, CITY OF RENO, CITY OF YERINGTON AND WASHOE COUNTY, WHICH SHALL GOVERN ALL WORK TO BE DONE UNDER THIS CONTRACT, EXCEPT AS MAY BE MODIFIED BY THE PROJECT SPECIAL PROVISIONS. THE PROJECT SPECIAL PROVISIONS ARE MODIFICATIONS OR CLARIFICATIONS OF CONSTRUCTION MATERIALS, METHODS, AND EQUIPMENT FROM THE STANDARD SPECIFICATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SAFETY DURING CONSTRUCTION AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. FENCE AND OR BARRICADE THE CONSTRUCTION AREA AS REQUIRED TO PROTECT ADJACENT SITES, VEHICULAR TRAFFIC AND PEDESTRIAN TRAFFIC. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618 IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
10. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND SHORING PROCEDURES AND CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
11. INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND/OR EROSION.
12. MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED STAGING AREAS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND SHALL REPLACE ANY MONUMENTS OBLITERATED OR DAMAGED DURING CONSTRUCTION AT HIS EXPENSE. REPLACEMENT SHALL BE PERFORMED BY A LICENSED PROFESSIONAL LAND SURVEYOR.
14. PROVIDE AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL, THROUGHOUT CONSTRUCTION, IN ACCORDANCE WITH APPLICABLE PARTS OF STANDARD SPECIFICATIONS SECTION 332, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD, LATEST EDITION).
15. THE CONTRACTOR SHALL MAINTAIN TRAFFIC CONTROL IN STRICT ACCORDANCE WITH PLANS AND SPECIFICATIONS AT ALL TIMES. ROADS WITHIN THE PROJECT HAVE STEEP GRADES, CURVES AND LIMITED SIGHT DISTANCE. ALTERNATIVE ACCESS IS NOT AVAILABLE TO SOME AREAS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL CONDUCT HIS/HER WORK TO MINIMIZE DISRUPTIONS IN NORMAL TRAFFIC PATTERNS AT ALL TIMES. IN AREAS WHERE ALTERNATE ACCESS IS NOT AVAILABLE, ROAD CLOSURES SHALL NOT BE MORE THAN 20 MINUTES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL ADJACENT PROPERTY OWNERS OF THE CONSTRUCTION ACTIVITY AND THE SCHEDULE OF SUCH ACTIVITIES. NOTIFICATION SHALL BE MADE IN WRITING AND HAND DELIVERED TO EACH RESIDENCE OR PLACE OF BUSINESS. ACCESS SHALL BE RESTORED AT THE END OF EACH WORK DAY.
16. FINE GRADING ELEVATIONS, SLOPES, AND OTHER ELEVATIONS NOT SHOWN SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO OBTAIN DRAINAGE IN THE DIRECTION AND TO THE DRAINAGE WAYS INDICATED. ALL GRADING ELEVATIONS SHALL BE APPROVED BY THE ENGINEER.
17. STANDARD WORK DAYS AND HOURS SHALL BE MONDAY THROUGH FRIDAY 7AM TO 7PM. SATURDAY MAY BE WORKED ON OCCASION ONLY TO MAKE UP FOR WEATHER DELAYS OR OTHER SCHEDULE DELAYS. NOISE GENERATING ACTIVITIES WILL BE LIMITED TO THE HOURS OF 8:00 AM TO 6:30 PM. NO CONSTRUCTION CAN OCCUR ON SUNDAYS.
18. NOISE SHALL BE REDUCED BY THE MANDATORY USE OF MUFFLERS ON ALL CONSTRUCTION VEHICLES AND EQUIPMENT. WHERE FEASIBLE, SOLENOIDAL PAVEMENT BREAKERS SHALL BE USED IN LIEU OF AIR POWERED JACK HAMMERS. NOISE GENERATING ACTIVITIES WILL BE LIMITED TO THE HOURS OF 8:00 AM TO 6:30 PM.
19. THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, COUNTY ORDINANCES OR STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND WASHOE COUNTY STANDARDS, THE STANDARDS SHALL APPLY AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAILY REMOVAL OF ALL CONSTRUCTION MATERIALS SPILLED ON PAVED STREETS, ONSITE AND OFFSITE.
21. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS, TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
22. THE CONTRACTOR SHALL NOTIFY ALL ENTITIES INVOLVED (PUBLIC AND PRIVATE) 48 HOURS PRIOR TO BEGINNING CONSTRUCTION, AND PROVIDE 48 HOURS PRIOR NOTICE FOR ALL SURVEYING AND INSPECTIONS DURING CONSTRUCTION.
23. ALL AREAS DISTURBED AND LEFT UNDEVELOPED FOR A PERIOD OF MORE THAN 14 DAYS SHALL BE STABILIZED BY THE APPLICTION OF AN APPROVED DUST PALLIATIVE AT THE COST OF THE CONTRACTOR.
24. NO CONSTRUCTION EQUIPMENT SHALL BE PARKED OR MATERIAL STORED ON CONCRETE OR ASPHALT SURFACES WITHOUT APPROVAL BY WASHOE COUNTY.
25. SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERD DURING SITE DEVELOPMENT, WORK SHALL TEMPORARILY BE HALTED AT THE SPECIFIC SITE AND THE DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, DIVISION OF HISTORIC PRESERVATION AND ARCHEOLOGY, SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO WORKING DAYS FROM THE DATE OF NOTIFICATION.
26. THE CONTRACTOR SHALL, AT ALL TIMES DURING CONSTRUCTION, PROTECT FROM DAMAGE EXISTING IMPROVEMENTS ON AND AROUND THE SITE, INCLUDING BUT NOT LIMITED TO, PAVEMENT, CURB & GUTTER, SIDEWALK, LANDSCAPING, SIGNAGE, STORM & SANITARY SEWERS, AND ALL UTILITIES. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE REPAIR OF ANY IMPROVEMENTS (EXISTING OR PROPOSED) DAMAGED THROUGHOUT THE COURSE OF CONSTRUCTION.
27. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES EMERGENCY ACCESS TO THE PROJECT SITE TO THE SATISFACTION OF THE FIRE DEPARTMENT. THE CONTRACTOR MUST NOTIFY THE SHERIFF'S DEPARTMENT AND FIRE DEPARTMENT DISPATCH DAILY ON ANY ROAD CLOSURES THAT MAY DISRUPT EMERGENCY RESPONSE.
28. THE CONTRACTOR SHALL ELIMINATE ALL MOSQUITO BREEDING PLACES WITHIN THE GRADED AREAS.
29. A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT. REFERENCE "XXXX" BY: XXX. DATED: XXX.
30. THE CONTRACTOR SHALL COMPLY WITH TRPA IDLING RESTRICTIONS. NO DIESEL ENGINE IN A VEHICLE EXCEEDING 10,000 POUNDS GROSS VEHICLE WEIGHT OR A DIESEL ENGINE IN OFF-ROAD SELF-PROPELLED EQUIPMENT EXCEEDING 25 HORSEPOWER SHALL IDLE MORE THAN 15 MINUTES, WITH EXCEPTION PURSUANT TO NAC 445B.576.

SWPPP NOTES

1. THE CONTRACTOR SHALL SUBMIT A COPY OF THEIR NOTICE OF INTENT (NOI) TO THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) TO BE REGULATED UNDER STORMWATER GENERAL PERMIT NVR100000 AND SUBMIT A COPY OF THE RECEIPT FOR PAYMENT OF THE ANNUAL FEE OR THE LETTER OF AUTHORIZATION FROM NDEP TO THE ENGINEER. ONCE PAYMENT HAS BEEN RECEIVED BY NDEP, THE APPLICANT IS IMMEDIATELY COVERED UNDER THE STATE'S PERMIT. TO SUBMIT A NOTICE OF INTENT (NOI) CONTACT:

   NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
   BUREAU OF WATER POLLUTION CONTROL
   901 S. STEWART STREET, SUITE 4001
   CARSON CITY, NV 89701
   775-687-9418
2. BY SUBMITTING A COPY OF THE NOI AND THE RECEIPT OR AUTHORIZATION FROM NDEP, THE CONTRACTOR ACKNOWLEDGES THAT THE CONTRACTOR IS AWARE OF THE REQUIREMENTS SET FORTH IN THE STATE'S GENERAL PERMIT AND HAS DEVELOPED AND WILL IMPLEMENT A SITE SPECIFIC STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR FURTHER ACKNOWLEDGES THAT THE CONTRACTOR IS AWARE OF THE TRUCKEE MEADOWS CONSTRUCTION SITE BEST MANAGEMENT PRACTICES HANDBOOK AND THE REQUIRED PERFORMANCE STANDARDS SET FORTH IN SECTION 3.3 OF THE HANDBOOK. TO ENSURE COMPLIANCE WITH THESE PERFORMANCE STANDARDS, THE CONTRACTOR SHALL SUBMIT A COMPLETED PERFORMANCE STANDARDS COMPLIANCE CHECKLIST, INDICATING THE BMP'S THAT IMPLEMENT STANDARDS 1-12. IT IS RECOMMENDED THAT THE CONTRACTOR ALSO ATTACH A COPY OF THE CHECKLIST TO THEIR SWPPP.
3. THE CONTRACTOR AND/OR AUTHORIZED AGENTS SHALL EACH DAY INSPECT CONDITION AND REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS-OF-WAY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM DRAIN SYSTEM.
4. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE CONTRACTOR AND CONTRACTOR'S AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN WASHOE COUNTY CODE CHAPTER 110 ARTICLE 421 AND TRPA.
5. TEMPORARY OR PERMANENT STABILIZATION PRACTICES SHALL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER SUBSTANTIAL CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO STORM WATER GENERAL PERMIT NVR100000.
6. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMP'S AT LEAST WEEKLY, PRIOR TO ANY FORECASTED RAIN EVENT AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT. THE CONTRACTOR OR CONTRACTOR'S AGENT SHALL UPDATE OR MODIFY THE STORM WATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS FROZEN GROUND CONDITIONS OR SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO STORM WATER GENERAL PERMIT NVR100000.
7. ACCUMULATED SEDIMENT IN BMP'S SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORM WATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR MORE.

UTILITIES:

1. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. WHERE EXCAVATION IS NECESSARY, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AND ALL AFFECTED UTILITY COMPANIES TO LOCATE ALL BURIED UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR RELOCATION OF UTILITIES AS REQUIRED BY THE WORK. THE UTILITY COMPANIES WILL PERFORM ALL RELOCATION WORK AT NO COST TO THE CONTRACTOR, PROVIDED THAT NO CONTRACTOR CAUSED DAMAGE TO UTILITIES HAS OCCURRED DUE TO CONTRACTOR NEGLIGENCE.
2. ALL UTILITIES IMPACTED BY IMPROVEMENTS SHALL BE RAISED, LOWERED, OR RELOCATED TO ACCOMMODATE THE CONSTRUCTION OF THOSE IMPROVEMENTS. CHANGES TO THE DESIGN OF IMPROVEMENTS AS A RESULT OF THESE UTILITY CONFLICTS MUST IMMEDIATELY BE REPORTED TO THE PROJECT ENGINEER, AND THE ALTERATION TO THE DESIGN MUST BE APPROVED BY THE PROJECT ENGINEER.
3. WATER LINE INSTALLATION NOTES:
   A. DISINFECTION AND COLIFORM TESTING PER AWWA C651-13.
   B. PRESSURE TESTING PER AWWA C600.
   C. ANY OPEN WATER LINES SHALL BE CAPPED AT THE END OF EACH DAY.
   D. ALL MATERIALS THAT COME IN CONTACT WITH THE WATER SYSTEM SHALL BE ANSI/NSF 61 CERTIFIED LEAD FREE.
   E. ALL SEWER AND WATER CONSTRUCTION TO CONFORM TO IVGID APPROVALS INCLUDING 2022 REQUIREMENTS TO CONSTRUCT WATER AND SEWER.
   F. ALL WATER LINES TO BE FULLY RESTRAINED CONSTRUCTION WITH THRUST BLOCKS.

SURVEY:

1. BASIS OF BEARING AND COORDINATES:
   NORTH AMERICAN DATUM OF 1983/1994 (NAD 83/94), NEVADA STATE PLANE WEST ZONE. AS DETERMINED WITH REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS, OBSERVED ON JULY 23, 2021, USING TRIMBLE R8 RECEIVER WITH CORRECTIONS RECEIVED FROM TRIMBLE R8 BASE STATION OCCUPYING NEVADA DEPARTMENT OF TRANSPORTATION CONTROL POINT "1583003A". ALL DIMENSIONS AND COORDINATES SHOWN ARE U.S. SURVEY FOOT GRID DISTANCES.

   "1583003A" STATE PLANE GRID COORDINATES, NV WEST ZONE
   N – 14764350.80
   E – 2238247.57
2. BASIS OF ELEVATION:
   A FOUND MAG NAIL AT THE NORTH WEST CORNER OF 941 TAHOE BOULEVARD (APN: 132-231-09) AS SHOWN ON THE SITE PLAN PREPARED BY ARNETTE AND ASSOCIATES
   "MAG NAIL"
   ELEVATION – 6406.00'

LEGEND

PROPOSED FEATURES

SYMBOL	DESCRIPTION
6400	MAJOR CONTOUR
6401	MINOR CONTOUR
	EDGE OF PAVEMENT
	SAWCUT
6"W	WATER LINE
	GATE VALVE
	DETECTOR CHECK VALVE
M	WATER METER
HYD	FIRE HYDRANT
4"SD	STORM DRAIN PIPE
	STORM DRAIN INLET
24"SD	INFILTRATION GALLERY
	FLOW LINE
	STORM DRAIN MANHOLE
4"FD	FOUNDATION DRAIN PIPE
8"SS	SANITARY SEWER PIPE
	SANITARY SEWER MANHOLE
2"G	GAS LINE
E	UNDERGROUND ELECTRIC
	FILTER FABRIC FENCE/SILT FENCE
X	CONSTRUCTION FENCING
	TREE PROTECTION FENCING
	FIBER ROLL
	INFILTRATION TRENCH
	PORTLAND CEMENT CONCRETE
	AC PAVEMENT
	REVEGETATION
0.20%	SLOPE INDICATORS
	TREE REMOVAL

EXISTING FEATURES

SYMBOL	DESCRIPTION
6400	MAJOR CONTOUR
	MINOR CONTOUR
	EDGE OF PAVEMENT
W	WATER LINE
SS	SANITARY SEWER PIPE
SD	STORM DRAIN PIPE
E	UNDERGROUND ELECTRIC
GAS	GAS LINE
OHU	OVERHEAD UTILITY
T	
U	UNDERGROUND UTILITY
	RIGHT-OF-WAY
	PROPERTY LINE
	SURVEY MONUMENT
S	SANITARY SEWER MANHOLE
D	STORM DRAIN MANHOLE
5040.60 EP	POINT ELEVATION W/DESCRIPTOR
	FIRE HYDRANT
	GATE VALVE
	LIGHT POLE
	AC PAVEMENT
22"P	TREE WITH DIA./TYPE

ABBREVIATIONS

NOT ALL ABBREVIATIONS LISTED ARE USED IN THESE PLANS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
A/G	ABOVE GROUND
@	AT
APPROX	APPROXIMATE
ASS'Y	ASSEMBLY
AVG	AVERAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BEGIN CURVE
BMP	BEST MANAGEMENT PRACTICES
BOW	BACK OF WALK
BS	BOTTOM OF STAIRS
BSP	BLACK STEEL PIPE
BW	BOTTOM OF WALL
BVC	BEGIN VERTICAL CURVE
C&G	CURB AND GUTTER
CB	CATCH BASIN
CF	CUBIC FEET
CL	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMM	COMMUNICATION
CONC	CONCRETE
CONST	CONSTRUCT
CP	CONTROL POINT
CY	CUBIC YARD
° OR DEG	DEGREE(S)
DI	DROP INLET
ø OR DIA	DIAMETER
DI	DUCTILE IRON
DWG	DRAWING
DW OR DWY	DRIVEWAY
E	EAST, EASTING
EA	EACH
EASE	EASEMENT
EC	END OF CURVE
EG	EXISTING GRADE
ELEC	ELECTRIC
EP	EDGE OF PAVEMENT
EL	ELEVATION
EVC	END OF VERTICAL CURVE
EX	EXISTING
FCA	FLANGE COUPLING ADAPTER
FH	FIRE HYDRANT
FG	FINISH GRADE
FFC	FRONT FACE CURB
FES	FLARED END SECTION
FL	FLOWLINE
FLG	FLANGED
FT OR '	FOOT, FEET
FV	FLUSH VALVE
G	GAS
GV	GATE VALVE
GB	GRADE BREAK
GSP	GALVANIZED STEEL PIPE
HP	HIGH POINT
HOR	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HMAC	HOT MIXED ASPHALT CONCRETE
IE	INVERT ELEVATION
ID	INSIDE DIAMETER
IN OR "	INCH
INT	INTERSECTION
IRR	IRRIGATION
LT,L	LEFT
LEN	LENGTH
LF	LINEAR FEET
LP	LOW POINT
LS	LUMP SUM
MFGR	MANUFACTURER
MH	MANHOLE
MAX	MAXIMUM
MDD	MAXIMUM DRY DENSITY
MJ	MECHANICAL JOINT
MI	MILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MVC	MIDDLE OF VERTICAL CURVE
N	NORTH, NORTHING
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
# OR NO	NUMBER
OC	ON CENTER
OG	ORIGINAL GRADE
OWS	OIL/WATER SEPARATOR
±	PLUS OR MINUS
PCC	PORTLAND CEMENT CONCRETE OR POINT OF COMPOUND CURVE
PE	PERMANENT EASEMENT
PL	PROPERTY LINE
POS	POSITIVE
PRC	POINT OF REVERSE CURVE
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTC	PERMISSION TO CONSTRUCT
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REVEG	REVEGETATION
RT,R	RIGHT
R/W, ROW	RIGHT-OF-WAY
S	SLOPE, SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FOOT/FEET
SHT	SHEET
SSMH	SANITARY SEWER MANHOLE
SSCO	SANITARY SEWER CLEAN OUT
SS	SANITARY SEWER, STAINLESS STEEL
STA	STATION
STD	STANDARD
SW	SIDEWALK
SY	SQUARE YARD
TBC	TOP BACK OF CURB
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TS	TOP OF STAIRS
TW	TOP OF WALL
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
U/G	UNDERGROUND
VC	VERTICAL CURVE
VG	VALLEY GUTTER
W	WATER
WL	WATER LINE
W	WEST
W/	WITH
WM	WATER METER

PRELIMINARY
FOR REVIEW
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DATE: 01-31-2023

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(775) 329-4955 * Fax (775) 329-5098

PROFESSIONAL ENGINEER STATE OF NEVADA
MICHAEL LEFRANCOIS
Exp.12/31/23
CIVIL
No.20115
1-31-23

947 TAHOE

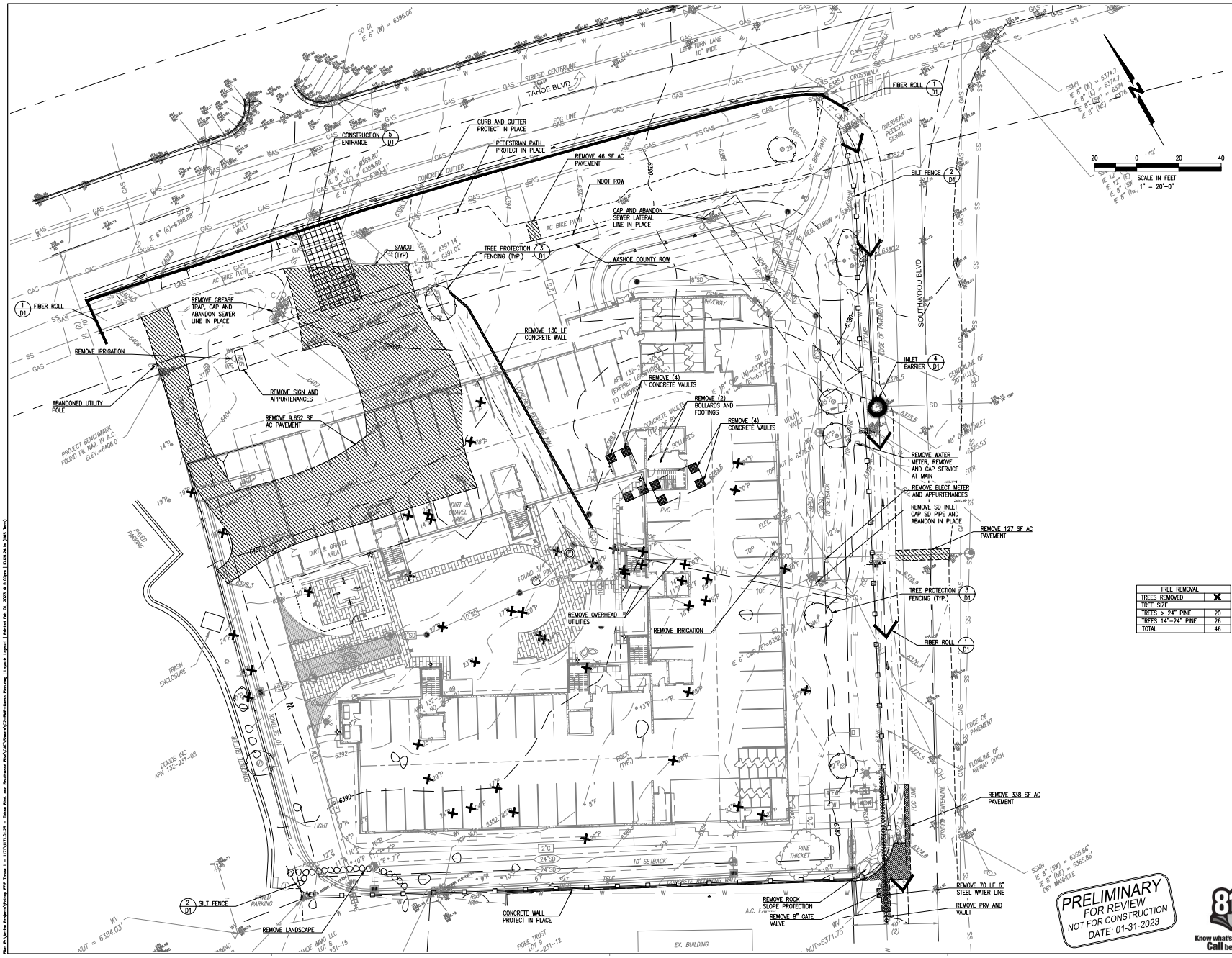
OWNER
PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

SHEET TITLE
NOTES, LEGEND, AND ABBREVIATIONS

DRAWING
C1



TREE REMOVAL	
TREES REMOVED	X
TREE SIZE	
TREES > 24" PINE	20
TREES 14"–24" PINE	26
TOTAL	46

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1-31-23

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940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

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SHEET TITLE

BMP-DEMO PLAN

DRAWING C2

SHEET 3 OF 23


TAHOE BLVD
SOUTHWOOD BLVD
SITE SECTION A-A
SEE SHEET C4A
SITE SECTION B-B
SEE SHEET C4A
EARTHWORK QUANTITY:
TOTAL DISTURBED AREA – 1.96 ACRES
TOTAL CUT – 27,342 CY
TOTAL FILL – 339 CY
NET CUT – 27,003 CY
DEEPEST CUT – 28'
DEEPEST FILL – 5.5'
SCALE IN FEET
1" = 20'-0"
EAST INFILTRATION GALLERY VOLUME=1,360 CF
WEST INFILTRATION GALLERY VOLUME=1,275 CF
SOUTH INFILTRATION GALLERY VOLUME=2,651 CF
RETAINING WALL (SEE STRUCTURAL PLANS) W/CABLE RAILING
CURB AND GUTTER
SIDEWALK
AC DRIVEWAY APRON
SAWCUT
DAYLIGHT
PRELIMINARY
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89451

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DESIGNED BY: KH
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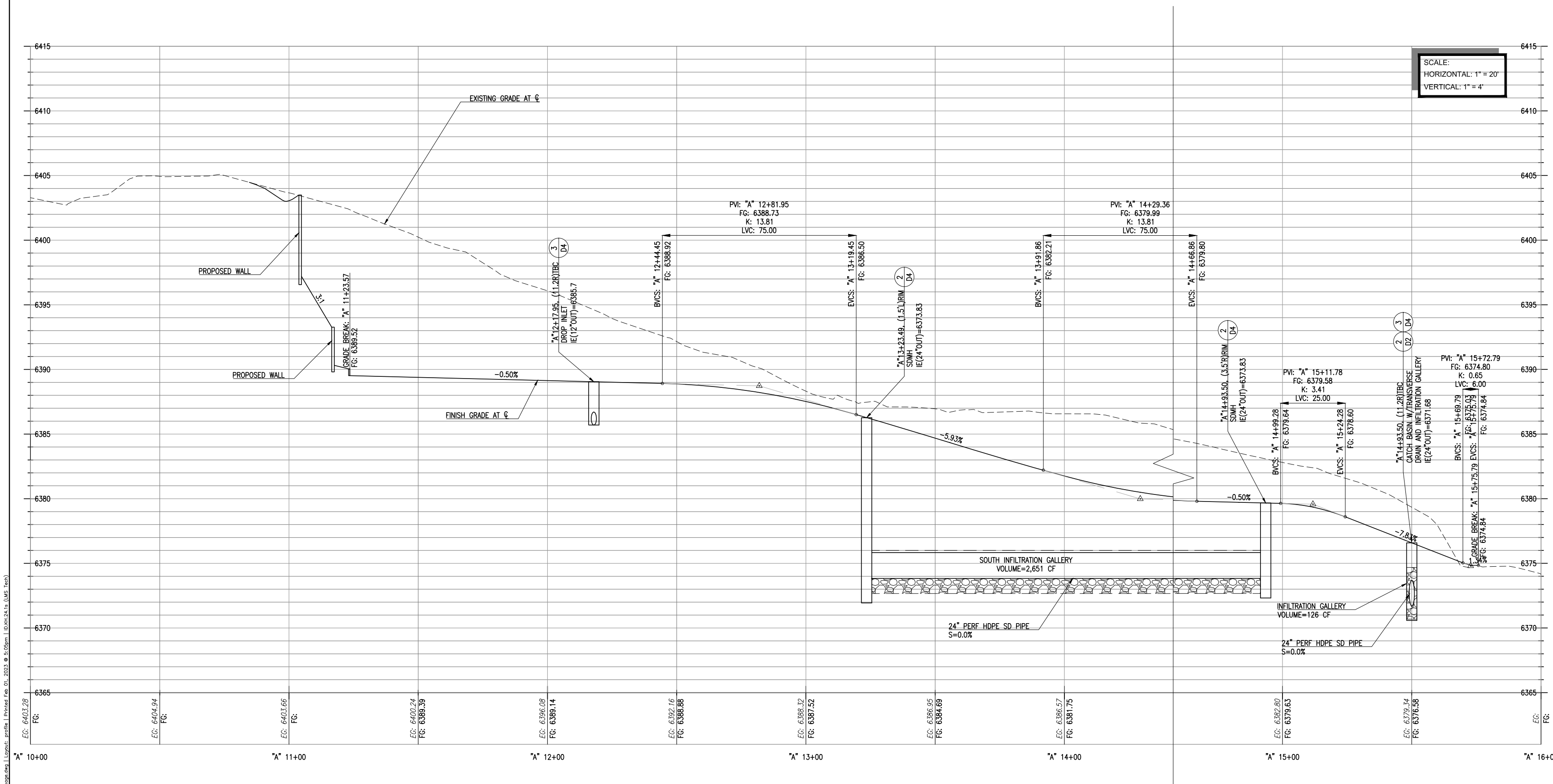
SHEET TITLE

GRADING AND DRAINAGE

DRAWING
C3


SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 4'
EXISTING GRADE AT ℄
PROPOSED WALL
GRADE BREAK: "A" 11+23.57
FG: 6389.52
3:1
-0.50%
FINISH GRADE AT ℄
"A"12+17.05, (11.2R)TBC
DROP INLET
IE(12"OUT)=6385.7
PVI: "A" 12+81.95
FG: 6388.73
K: 13.81
LVC: 75.00
BVCS: "A" 12+44.45
FG: 6388.92
EVCS: "A" 13+19.45
FG: 6386.50
"A"13+23.49, (1.5L)RIM
SDMH
IE(24"OUT)=6373.83
-5.93%
PVI: "A" 14+29.36
FG: 6379.99
K: 13.81
LVC: 75.00
BVCS: "A" 13+91.86
FG: 6382.21
EVCS: "A" 14+66.86
FG: 6379.80
"A"14+93.50, (3.5'R)RIM
SDMH
IE(24"OUT)=6373.83
-0.50%
SOUTH INFILTRATION GALLERY
VOLUME=2,651 CF
24" PERF HDPE SD PIPE
S=0.0%
PVI: "A" 15+11.78
FG: 6379.58
K: 3.41
LVC: 25.00
BVCS: "A" 14+99.28
FG: 6379.64
EVCS: "A" 15+24.28
FG: 6378.60
"A"14+93.50, (11.2R)TBC
CATCH BASIN W/TRANSVERSE
DRAIN AND INFILTRATION GALLERY
IE(24"OUT)=6371.68
PVI: "A" 15+72.79
FG: 6374.80
K: 0.65
LVC: 6.00
BVCS: "A" 15+69.79
FG: 6375.03
EVCS: "A" 15+75.79
FG: 6374.84
GRADE BREAK
-7.84%
INFILTRATION GALLERY
VOLUME=126 CF
24" PERF HDPE SD PIPE
S=0.0%
6415
6410
6405
6400
6395
6390
6385
6380
6375
6370
6365
EG: 6403.28
EG: 6404.94
EG: 6403.66
EG: 6400.24 FG: 6389.39
EG: 6396.08 FG: 6389.14
EG: 6392.16 FG: 6388.88
EG: 6388.32 FG: 6387.52
EG: 6386.95 FG: 6384.69
EG: 6386.57 FG: 6381.75
EG: 6382.80 FG: 6379.63
EG: 6379.34 FG: 6376.58
"A" 10+00
"A" 11+00
"A" 12+00
"A" 13+00
"A" 14+00
"A" 15+00
"A" 16+00

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MICHAEL LEFRANCOIS — CIVIL — No. 20115 — Exp. 12/31/23 — 1-31-23

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
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DATE: 01-31-2023

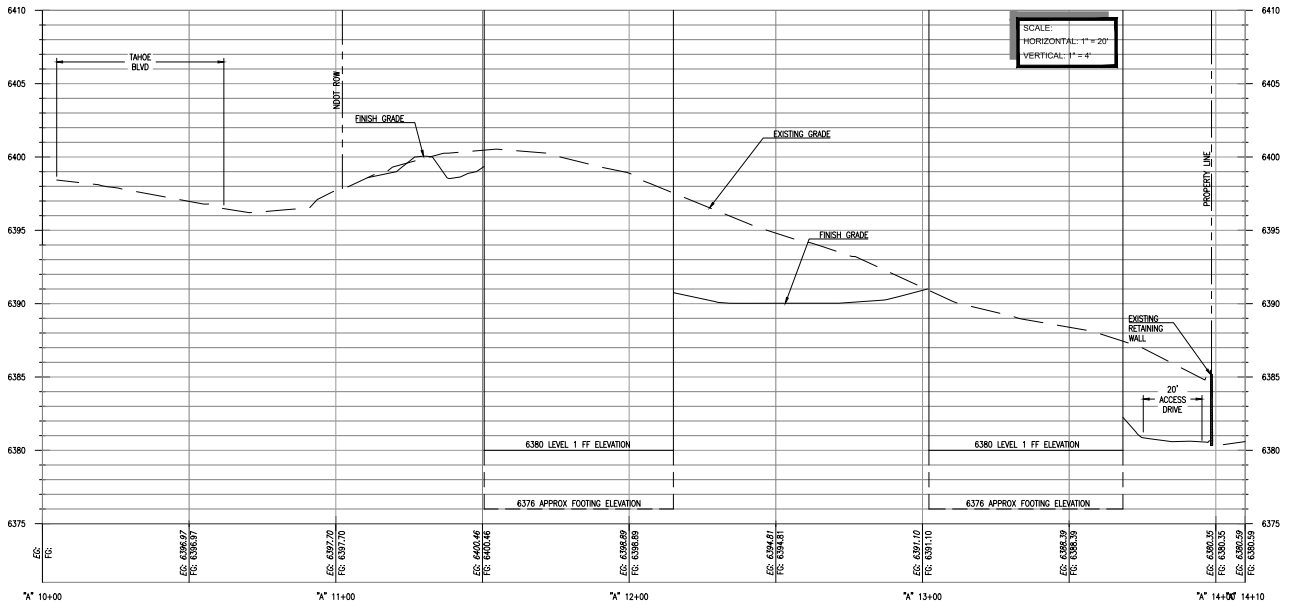
SHEET TITLE

DRIVEWAY ACCESS PROFILE

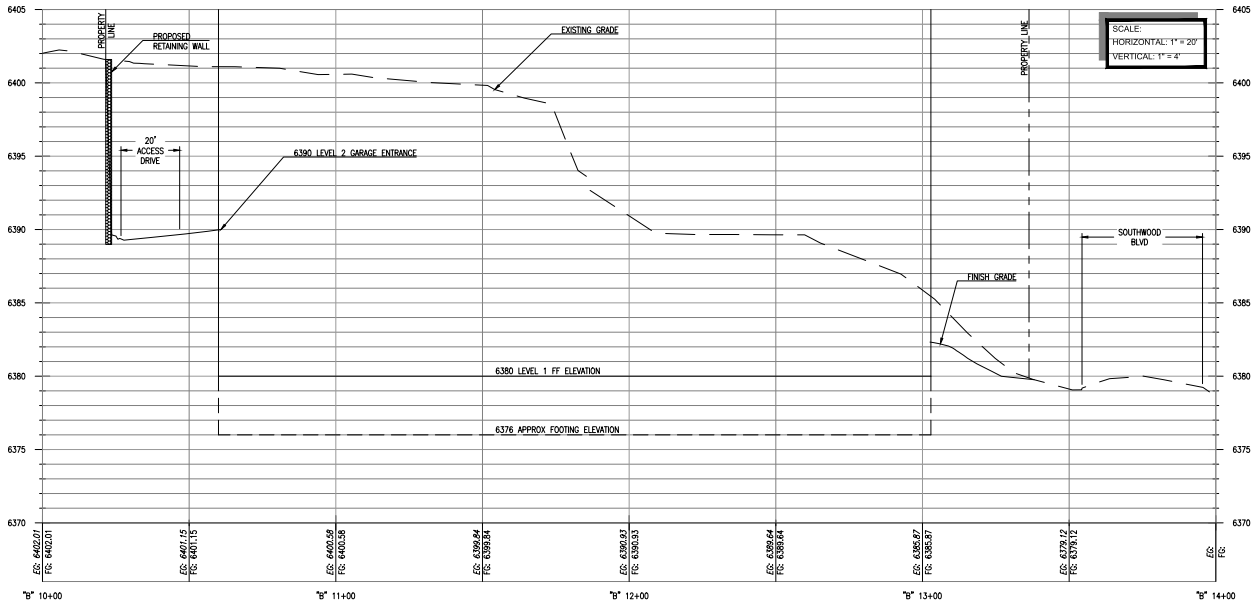
DRAWING

C4

PRELIMINARY FOR REVIEW NOT FOR CONSTRUCTION DATE: 01-31-2023



SECTION A-A



SECTION B-B

PRELIMINARY
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PROFESSIONAL ENGINEER STATE OF NEVADA
MICHAEL FRANCOIS
Exp.12/31/23
CIVIL
No. 20115
1-31-23

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

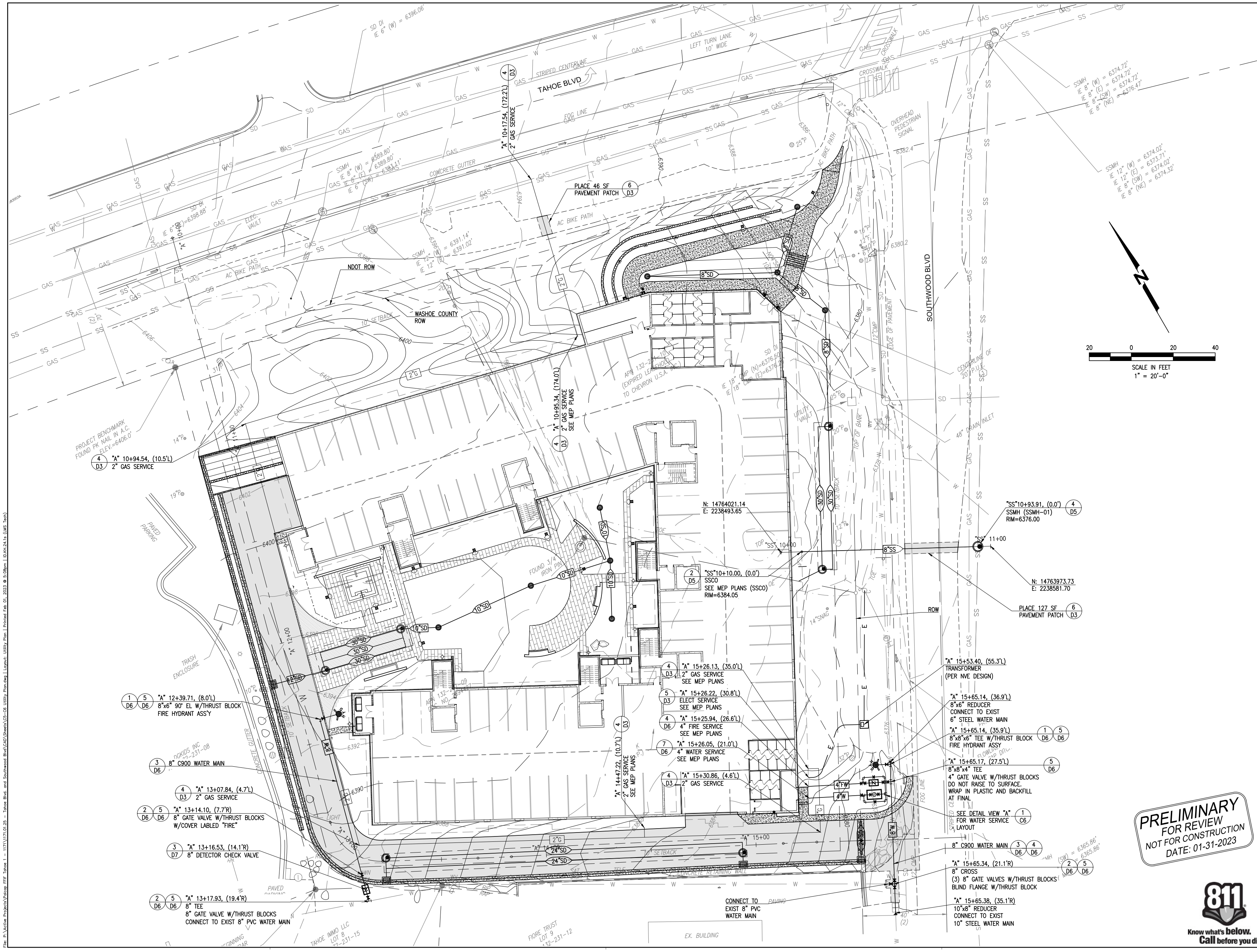
PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE: --
DATE: 01-31-2023

SHEET TITLE

SITE
CROSS SECTIONS

DRAWING C4A

SHEET 6 OF 23



TAHOE BLVD
SOUTHWOOD BLVD
LEFT TURN LANE 10' WIDE
STRIPED CENTERLINE
FOG LINE
CONCRETE GUTTER
AC BIKE PATH
CROSSWALK
OVERHEAD PEDESTRIAN SIGNAL
NDOT ROW
WASHOE COUNTY ROW
PLACE 46 SF PAVEMENT PATCH 6 D3
"A" 10+17.54, (172.2'L) 4 D3 2" GAS SERVICE
"A" 10+95.34, (174.0'L) 4 D3 2" GAS SERVICE SEE MEP PLANS
4 D3 "A" 10+94.54, (10.5'L) 2" GAS SERVICE
PROJECT BENCHMARK FOUND PK NAIL IN A.C. ELEV.=6406.0'
SSMH IE 8" (W) = 6389.80' IE 8" (E) = 6389.80' IE 6" (SW) = 6389.11'
SSMH IE 12" (W) = 6391.14' IE 12" (E) = 6391.02'
SSMH IE 12" (W) = 6374.72' IE 8" (E) = 6374.72' IE 8" (SW) = 6374.72' IE 8" (NE) = 6376.47'
SSMH IE 12" (W) = 6374.02' IE 12" (E) = 6374.71' IE 8" (SW) = 6374.02' IE 8" (NE) = 6374.32'
SD DI IE 6" (W) = 6396.06'
N: 14764021.14 E: 2238493.65
"SS"10+93.91, (0.0') 4 D5 SSMH (SSMH-01) RIM=6376.00
N: 14763973.73 E: 2238581.70
PLACE 127 SF PAVEMENT PATCH 6 D3
"SS"10+10.00, (0.0') 2 D5 SSCO SEE MEP PLANS (SSCO) RIM=6384.05
4 D3 "A" 15+26.13, (35.0'L) 2" GAS SERVICE SEE MEP PLANS
5 D3 "A" 15+26.22, (30.8'L) ELECT SERVICE SEE MEP PLANS
4 D6 "A" 15+25.94, (26.6'L) 4" FIRE SERVICE SEE MEP PLANS
7 D6 "A" 15+26.05, (21.0'L) 4" WATER SERVICE SEE MEP PLANS
4 D3 "A" 15+30.86, (4.6'L) 2" GAS SERVICE
4 D3 "A" 14+47.22, (10.7'L) 2" GAS SERVICE SEE MEP PLANS
"A" 15+53.40, (55.3'L) TRANSFORMER (PER NVE DESIGN)
"A" 15+65.14, (36.9'L) 8"x6" REDUCER CONNECT TO EXIST 6" STEEL WATER MAIN
"A" 15+65.14, (35.9'L) 1 D6 5 D6 8"x8"x6" TEE W/THRUST BLOCK FIRE HYDRANT ASSY
"A" 15+65.17, (27.5'L) 5 D6 8"x8"x4" TEE 4" GATE VALVE W/THRUST BLOCKS DO NOT RAISE TO SURFACE. WRAP IN PLASTIC AND BACKFILL AT FINAL
SEE DETAIL VIEW "A" 1 C6 FOR WATER SERVICE LAYOUT
8" C900 WATER MAIN 3 D6 4 D6
"A" 15+65.34, (21.1'R) 2 D6 5 D6 8" CROSS (3) 8" GATE VALVES W/THRUST BLOCKS BLIND FLANGE W/THRUST BLOCK
"A" 15+65.38, (35.1'R) 10"x8" REDUCER CONNECT TO EXIST 10" STEEL WATER MAIN
1 D6 5 D6 "A" 12+39.71, (8.0'L) 8"x6" 90° EL W/THRUST BLOCK FIRE HYDRANT ASS'Y
3 D6 8" C900 WATER MAIN
4 D3 "A" 13+07.84, (4.7'L) 2" GAS SERVICE
2 D6 5 D6 "A" 13+14.10, (7.7'R) 8" GATE VALVE W/THRUST BLOCKS W/COVER LABLED "FIRE"
3 D7 "A" 13+16.53, (14.1'R) 8" DETECTOR CHECK VALVE
2 D6 5 D6 "A" 13+17.93, (19.4'R) 8" TEE 8" GATE VALVE W/THRUST BLOCKS CONNECT TO EXIST 8" PVC WATER MAIN
CONNECT TO EXIST 8" PVC WATER MAIN
TRASH ENCLOSURE
PAVED PARKING
EX. BUILDING
ROW
20 0 20 40
SCALE IN FEET 1" = 20'-0"
PRELIMINARY FOR REVIEW NOT FOR CONSTRUCTION DATE: 01-31-2023
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1885 S. Arlington Ave. Suite 111
Reno, Nevada 89509
(775) 329-4955 * Fax (775) 329-5098

MICHAEL LEFRANCOIS Exp.12/31/23 CIVIL No.20115 PROFESSIONAL ENGINEER STATE OF NEVADA 1-31-23

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

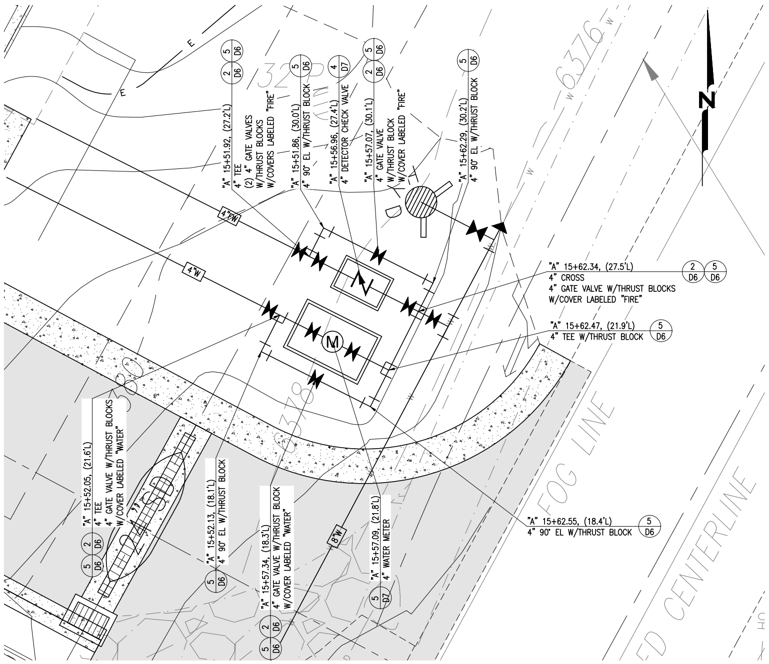
PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

SHEET TITLE

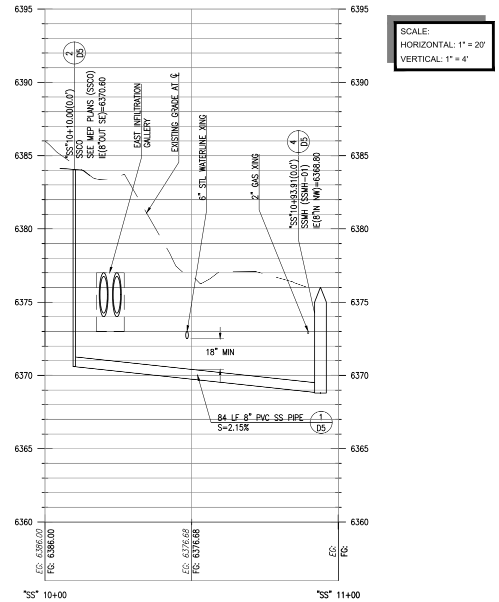
UTILITY PLAN

DRAWING

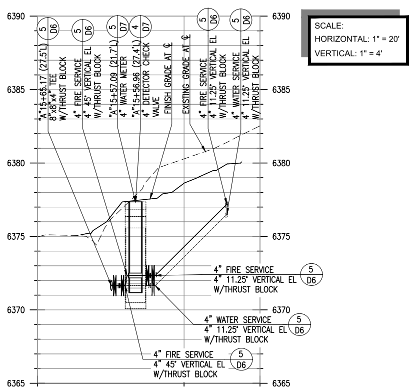
C5



1 C6 DETAIL VIEW "A"
1" = 5'



SANITARY SEWER PROFILE



WATER SERVICE PROFILE

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NO.	DATE	DESCRIPTION

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DESIGNED BY: KH
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CHECKED BY: -- DATE --
DATE: 01-31-2023

SHEET TITLE

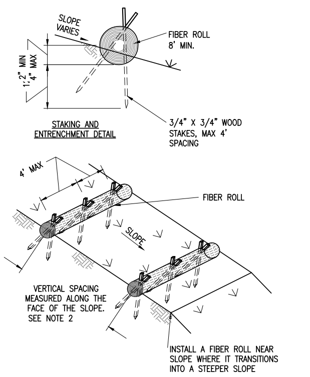
SANITARY SEWER PROFILE

DRAWING
C6

SHEET 8 OF 23

TEMPORARY EROSION, SEDIMENT, & POLLUTION CONTROL NOTES

1. THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMPs) IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL PLAN NOTES AND DETAILS INCLUDED IN THIS PLAN SET MAY BE INTEGRATED INTO THE PROJECT SWPPP.
2. GRADING, EXCAVATION, BACKFILLING AND CLEARING OF VEGETATION OR OTHER DISTURBANCE OF SOIL SHALL NOT OCCUR BETWEEN OCTOBER 15 AND MAY 1.
3. ALL CONSTRUCTION SITES SHALL BE WINTERIZED BY OCTOBER 15 TO REDUCE THE WATER QUALITY IMPACTS ASSOCIATED WITH WINTER WEATHER PER TRPA CODE CHAPTER 33.3.1.D.
4. THE PROJECT SITE AND ALL TEMPORARY BMPs SHALL BE INSPECTED BY QUALIFIED PERSONNEL BEFORE AND AFTER EACH STORM EVENT AND DAILY DURING CONSTRUCTION WORK.
5. THE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY BMPS AT ALL TIMES.
6. DUST CONTROL
   a. DUST CONTROL MEASURES SHALL BE REQUIRED FOR ANY GRADING ACTIVITY CREATING SUBSTAT CONTROL MEASURES SHALL BE APPROVED BY TRPA.
   b. AT A MINIMUM THE CONTRACTOR SHALL PROVIDE A WATER TRUCK TO WATER AREAS AS NECESSARY TO CONTROL DUST.
   c. STOCKPILES AND LOOSE SOIL MOUNDS SHALL BE PROTECTED FROM WIND OR WATER EROSION BY BEING APPROPRIATELY PROTECTED OR COVERED WHEN CONSTRUCTION IS NOT IN ACTIVE PROGRESS OR WHEN REQUIRED BY TRPA OR THE SWPPP.
7. VEGETATION PROTECTION
   a. ALL TREES AND NATURAL VEGETATION SHALL NOT BE DISTURBED, INJURED OR REMOVED EXCEPT AS SPECIFICALLY CALLED FOR IN THIS PLAN SET AND TRPA CODE CHAPTER 33.6.
   b. TREES SHALL NOT BE USED FOR THE PURPOSE OF SIGN POSTS, TELEPHONE WIRES OR TEMPORARY POWER, BRACING FOR FORMS OR OTHER SIMILAR TYPES OF USES PER TRPA CODE CHAPTER 33.6.7.
   c. VEGETATION PROTECTION FENCING SHALL BE CONSTRUCTED WITH METAL POSTS, INDUSTRY STANDARD ORANGE MESH FENCING, AND AT LEAST 4 FEET TALL, UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE COUNTY OR TRPA.
8. EROSION CONTROL
   a. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL FEATURES AND SOIL.
   b. PHASE CONSTRUCTION ACTIVITY WHEN FEASIBLE.
   c. CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT SITE.
   d. DISTURBED AREAS SHOULD BE STABILIZED AS SOON AS PRACTICABLE AFTER CONSTRUCTION ACTIVITIES AT THAT LOCATION HAVE CEASED.
   e. IF ROLLED EROSION CONTROL PRODUCTS ARE USED FOR SOIL STABILIZATION, INSTALLATION AND STAKING SHALL BE DONE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
   f. NO VEHICLE OR HEAVY EQUIPMENT SHALL BE ALLOWED IN A STREAM ENVIRONMENT ZONE OR WET AREA EXCEPT AS AUTHORIZED BY TRPA.
   g. ONLY EQUIPMENT OF A SIZE AND TYPE THAT WILL DO THE LEAST AMOUNT OF DAMAGE, UNDER PREVAILING SITE CONDITIONS, AND CONSIDERING THE NATURE OF THE WORK TO BE PERFORMED, SHALL BE USED.
9. SEDIMENT CONTROL
   a. STORM DRAIN INLETS SHOULD BE PROTECTED AT ALL TIMES UTILIZING BMP – 12
   b. SILT FENCE BMP – 10 OR FIBER ROLLS BMP – 9 SHOULD BE USED AS PERIMETER CONTROLS FOR THE PROJECT SITE AS DIRECTED BY THE SWPPP OR THE COUNTY AND TRPA IN THE FIELD.
   c. EXCAVATED MATERIAL SHALL BE STORED UPGRADE FROM THE EXCAVATED AREA WHENEVER POSSIBLE. NO MATERIAL SHALL BE STORED IN ANY STREAM ENVIRONMENT ZONE OR WET AREA.
   d. CONTRACTOR SHALL PROVIDE CRUSHED ROCK OR RUMBLE BOARDS IN AREAS OF CONSTRUCTION SITE ACCESS AND EXITS.
   e. SOIL AND CONSTRUCTION MATERIAL SHALL NOT BE TRACKED OFF THE CONSTRUCTION SITE. GRADING OPERATIONS SHALL CEASE IN THE EVENT THAT A DANGER OF VIOLATING THIS CONDITION EXISTS.
   f. STREET SWEEPING SHALL BE PERFORMED AS NEEDED TO KEEP TRAVELED WAYS FREE OF SEDIMENT (TYPICALLY DAILY).
10. POLLUTION CONTROL
   a. NO WASHING OF VEHICLES OR HEAVY EQUIPMENT, INCLUDING CONCRETE MIXERS, SHALL BE PERMITTED ANYWHERE ON THE SUBJECT PROPERTY UNLESS AUTHORIZED BY TRPA IN WRITING.
   b. DISPOSAL OF ANY EXCAVATED OR WASTE MATERIAL (LIQUID OR SOLID) SHALL BE TO A SITE OUTSIDE THE TAHOE BASIN OR A LOCATION APPROVED BY TRPA IN WRITING.
   c. STAGING AREAS SHOULD BE CLEARLY DELINEATED BY THE CONTRACTOR AND APPROVED BY TRPA PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
   d. THE CONTRACTOR SHALL DEVELOP AND HAVE A SPILL PREVENTION AND RESPONSE PLAN WITH SPILL RESPONSE MATERIALS ONSITE AT ALL TIMES.
11. TEMPORARY BMPs SHALL BE INSTALLED AND MAINTAINED PRIOR TO EXCAVATION AND DURING ALL PHASES OF THE PROPOSED PROJECT.
12. PROJECT CONSTRUCTION SHALL BE PHASED TO MINIMIZE THE AMOUNT OF DISTURBED SOILS EXISTING AT ONE TIME. ADDITIONALLY ALL NEW AND EXISTING CONVEYANCE AND TREATMENT FACILITIES SHALL BE FITTED WITH TEMPORARY BMPs TO PREVENT THE TRANSPORT OF SEDIMENT DURING STORM EVENTS DURING CONSTRUCTION.
13. TEMPORARY EROSION CONTROL DEVICES SHALL BE PLACED EVERY 500 FEET MINIMUM IN EXCAVATED TRENCHES AND DITCHES. WHERE PRACTICAL, TEMPORARY EROSION CONTROL DEVICES SHALL BE PLACED EVERY 100 FEET. TEMPORARY EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL SITE IS STABILIZED.
14. TEMPORARY BMPs SHOWN ON THE PLANS DO NOT FULFILL ALL REQUIREMENTS OF THE SWPPP. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE TEMPORARY BMPs ARE INSTALLED IN ALL AREAS NECESSARY TO COMPLY WITH THE SWPPP, NDEP, AND TRPA PERMITS.



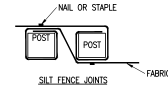
TYPICAL FIBER ROLL INSTALLATION

NOTES:

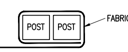
1. FIBER ROLLS SHOULD CONSIST OF STRAW, FLAX, WOOD EXCELSIOR OR COCONUT FIBERS BOUND IN A TIGHT TUBULAR ROLL.
2. LOCATE FIBER ROLLS ON LEVEL CONTOURS SPACED AS FOLLOWS:
   - SLOPE INCLINATION OF 4:1 (H:V) OR FLATTER: FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 20 FT.
   - SLOPE INCLINATION BETWEEN 4:1 AND 2:1 (H:V): FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 15 FT.
   - SLOPE INCLINATION OF 2:1 (H:V) OR GREATER: FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 10 FT.
3. TURN THE ENDS OF THE FIBER ROLL UP SLOPE TO PREVENT RUNOFF FROM GOING AROUND THE ROLL.
4. IF MORE THAN ONE FIBER ROLL IS PLACED IN A ROW, THE ROLLS SHOULD BE OVERLAPPED, NOT ABUTTED.
5. FIBER ROLLS MAY BE USED FOR DRAINAGE INLET PROTECTION IF PROPERLY ANCHORED.
6. SEDIMENT SHOULD BE REMOVED WHEN SEDIMENT ACCUMULATION REACHES ONE-HALF THE SEDIMENT STORAGE DEPTH.

1 / D1 FIBER ROLL (BMP-9)
NTS

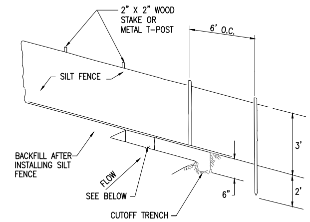
NOTES:
1. SITE CONSIDERATIONS
   a. DO NOT USE IN STREAMS, CHANNELS, DRAIN INLETS, OR ANYWHERE FLOW IS CONCENTRATED. DO NOT USE TO DIVERT FLOW.
   b. MAXIMUM SLOPE LENGTH BEHIND FENCE LINE SHOULD NOT BE LONGER THAN 200'.
   c. MAXIMUM SLOPE STEEPNESS BEHIND FENCE LINE SHOULD NOT BE STEEPER THAN 1:1.
   d. WHERE POSSIBLE, MINIMUM LENGTH FROM TOE OF SLOPE TO FENCE SHOULD BE 6'–8'
2. FABRIC
   a. SILT FENCE FABRIC SHOULD BE WOVEN POLYPROPYLENE WITH A MINIMUM WIDTH OF 48" AND A MINIMUM TENSILE STRENGTH OF 100 LB FORCE.
   b. THE FABRIC SHOULD CONFORM TO THE REQUIREMENTS IN ASTM DESIGNATION D4632 AND SHOULD HAVE AN INTEGRAL REINFORCEMENT LAYER. THE REINFORCEMENT LAYER SHOULD BE A POLYPROPYLENE, OR EQUIVALENT, NET PROVIDED BY THE MANUFACTURER.
   c. THE PERMITTIVITY OF THE FABRIC SHOULD BE BETWEEN 0.1 SEC–1 AND 0.15 SEC–1 IN CONFORMANCE WITH THE REQUIREMENTS IN THE ASTM DESIGNATION D4491.
3. POSTS AND STAPLES OR WIRE
   a. POST SHALL BE A MINIMUM OF 2" X 2" WOOD STAKES OF COMMERCIAL QUALITY LUMBER OR EQUIVALENT STRENGTH METAL T-POST OR GREATER.
   b. STAPLES USED TO FASTEN THE FENCE FABRIC TO THE STAKES SHOULD NOT BE LESS THAN 1.75" LONG AND SHOULD BE FABRICATED FROM 15 GAUGE OR HEAVIER WIRE. PLASTIC WIRE TIES AND/OR STEEL BALING WIRE (9 GAUGE OR HEAVIER) MAY BE SUBSTITUTED. NOT LESS THAN 4 STAPLES/TIES SHALL BE USED IN EACH STAKE.
4. INSTALLATION
   a. EXCAVATE TRENCH A MIMIMUM OF 6" X 6" ALONG THE ENTIRE LENGTH OF THE FENCE LINE.
   b. STAKES SHALL BE SPACED AT 6'–0" MAXIMUM AND SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
   c. THE LAST 8' OF FENCE SHALL BE TURNED UPSLOPE.
   d. CONNECTION/JOINING OF SILT FENCES SHALL BE COMPLETED BY TIGHTLY OVERLAPPING THE ENDS OF THE ROLLS A MINIMUM OF 12" OR BY OVERLAPPING THE END POSTS AND SECURING THE TWO POSTS TOGETHER TIGHTLY.
   e. BOTTOM OF SILT FENCE SHOULD BE KEYED IN 12".
   f. DO NOT INSTALL PERPENDICULAR TO ANY SLOPE OR ANY CONTOUR LINE.
5. MAINTENANCE
   a. SILT FENCES SHOULD BE LEFT IN PLACE, REGULARLY INSPECTED, AND MAINTAINED UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.
   b. SEDIMENT SHOULD BE REMOVED BEFORE THE SEDIMENT ACCUMULATION REACHES ONE-THIRD OF THE BARRIER HEIGHT.

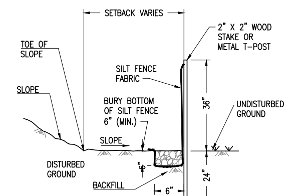


SILT FENCE JOINTS

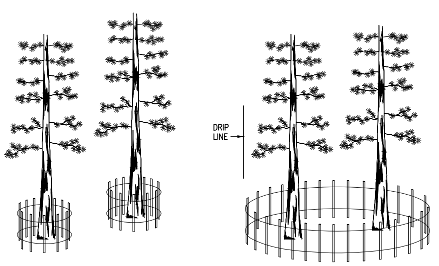


END POST DETAIL (TOP VIEW)



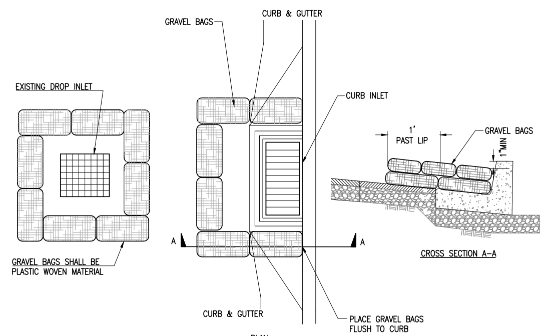


2 / D1 SILT FENCE (BMP-10)
NTS



NOTES:
1. FENCING OF VEGETATION PROTECTION AREAS AND "NON-APPROVED" CONSTRUCTION AREAS SHALL BE AT LEAST 48 INCHES HIGH AND SHALL BE CONSTRUCTED OF METAL POSTS AND ORANGE CONSTRUCTION FENCING AT LEAST 48 INCHES HIGH.
2. NO MATERIAL OR EQUIPMENT SHALL ENTER OR BE PLACED IN THE AREAS PROTECTED BY FENCING OR OUTSIDE THE APPROVED CONSTRUCTION AREA WITHOUT PRIOR APPROVAL FROM THE COUNTY. FENCES SHALL NOT BE MOVED WITHOUT PRIOR APPROVAL.
3. TREE PROTECTION FENCING SHOWN ON PLANS IS NOT TO SCALE.

3 / D1 TREE PROTECTION/ CONSTRUCTION FENCING (BMP-8)
NTS

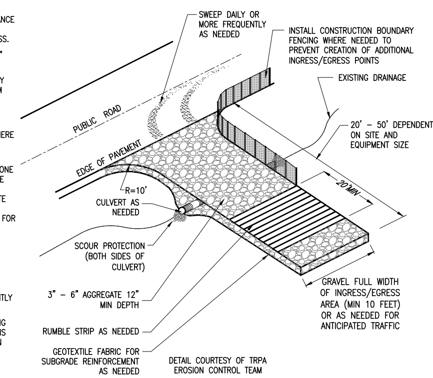


NOTES:
1. GRAVEL BAG CONFIGURATION SHOWN SHALL BE USED FOR PAVED OR UNPAVED AREAS WITH SLOPES LESS THAN 5%. IF TWO LAYERS OF GRAVEL BAGS ARE INSTALLED, PROVIDE GAPS AS FOLLOWS:
   a. LEAVE GAP OF ONE BAG DIRECTLY IN FRONT OF THE DROP INLET FOR DROP INLETS LOCATED IN A SUMP.
   b. LEAVE GAP OF ONE BAG ON THE UPSLOPE SIDE FOR AREAS WITH SLOPES GREATER THAN 2% BUT LESS THAN 5%.
2. GRAVEL BAGS SHALL BE FILLED WITH CLEAN, WASHED ¾" GRAVEL OR EQUIVALENT.
3. DAMAGED GRAVEL BAGS SHALL BE REPLACED PROMPTLY.
4. GRAVEL BAG BERM HEIGHT SHALL EQUAL 5" OR 8" MIMIMUM DEPENDENT ON CURB HEIGHT. MAINTAIN 1" MIN FROM TOP OF GRAVEL BAG TO TOP OF CURB.

4 / D1 GRAVEL BAG CURB INLET SEDIMENT BARRIER (BMP-12)
NTS

NOTES:

1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE USED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS.
2. THE AGGREGATE SHALL BE 3" – 6" CRUSHED ROCK.
3. THE ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
4. THE ENTRANCE SHALL BE CONSTRUCTED ON LEVEL GROUND, WHERE FEASIBLE, AND LOCATED WHERE PERMANENT DRIVEWAY OR PARKING AREAS ARE PLANNED.
5. TOP DRESSING WITH ADDITIONAL STONE SHALL BE PROVIDED WHEN SURFACE VOIDS ARE NO LONGER VISIBLE OR WHEN THERE IS FREQUENT OFF-SITE TRACKING. FREQUENT OFF-SITE TRACKING MAY INDICATE THE NEED FOR GRAVEL REPLACEMENT.
6. CONTRACTOR TO MAINTAIN CONSTRUCTION ENTRANCE AT ALL TIMES.
7. ALL SEDIMENT DEPOSITS ON PAVED ROADWAYS SHALL BE SWEPT AND REMOVED DAILY OR MORE FREQUENTLY AS NEEDED.
8. LIMIT CONSTRUCTION TRAFFIC DURING WET WEATHER OR WHEN THE SITE IS SATURATED, MUDDY OR COVERED IN SNOW.
9. LIMIT SPEEDS OF INGRESS/EGRESS VEHICLES TO 5 MPH OR LESS.
10. GEOTEXTILE & ROCK SHALL BE REMOVED AT COMPLETION OF CONSTRUCTION.
11. ALL AREAS DISTURBED BY THE CONTRACTOR AND NOT OTHERWISE STABILIZED SHALL BE RESTORED WITH VEGETATION TO THE SATISFACTION OF THE COUNTY.



5 / D1 CONSTRUCTION ENTRANCE
NTS

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NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

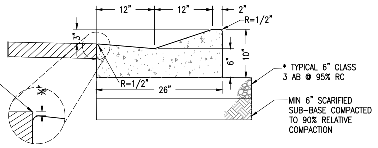
SHEET TITLE

BMP DETAILS

DRAWING

D1

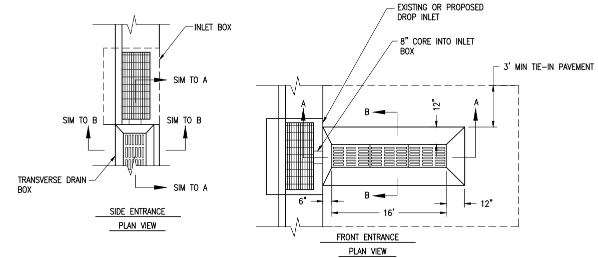
SHEET 9 OF 23

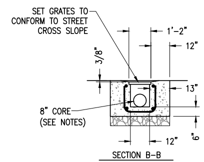


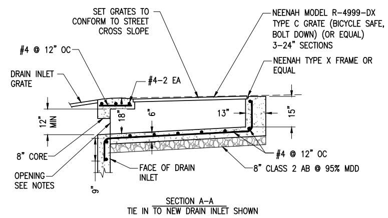
NOTES:

1. ALL BASE MATERIAL SHALL BE COMPACTED AND TESTED BY THE CITY OR BY A THIRD PARTY INSPECTOR AT THE CITY'S DISCRETION PRIOR TO CONCRETE POUR. NOTIFY THE CITY AT LEAST 24 HRS PRIOR TO POUR.
2. CONTRACTOR SHALL CONTACT INSPECTOR FOR SCHEDULING CURB STRINGLINE INSPECTION AT LEAST 24 HRS PRIOR TO CONCRETE POUR.
3. ALL FLOWLINES SHALL BE WATER TESTED BEFORE ACCEPTANCE FOR PAYMENT. CONTRACTOR SHALL CONTACT INSPECTOR TO SCHEDULE WATER TESTING.
4. LOCATE 2" DEEP TRANSVERSE SCORES AT 10' INTERVALS IN CURB AND GUTTERS. INSTALL EXPANSION JOINTS AT ALL COLD JOINTS.
5. (2) #5x12" DOWELS ARE REQUIRED AT ALL COLD JOINTS, INCLUDING WHERE NEW CURB AND GUTTER IS TO MEET EXISTING. DOWELS SHALL BE GREASED AND INSTALLED INTO THE CURED CONCRETE CURB AND GUTTER, CENTERED VERTICALLY AND 3" OFF OF EACH SIDE.
6. NO WASHOUT OF TRUCKS AND/OR EQUIPMENT WILL BE ALLOWED ON SITE UNLESS A BASIN IS PROVIDED AND APPROVED BY THE INSPECTOR.
7. CONTRACTOR MUST TRENCH PLATE ALL DRIVEWAYS FOR 72 HOURS AFTER CONCRETE POUR.
8. CITY HAS THE RIGHT TO REJECT CURB FOR NON-CONFORMANCE AND/OR POST CONSTRUCTION DAMAGE.
9. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BMPS, AC CUTS AND REPLACEMENT, REVEGETATION AND ALL OTHER INCIDENTALS ASSOCIATED WITH CURB INSTALLATION.

1/D2 CURB AND GUTTER
NTS



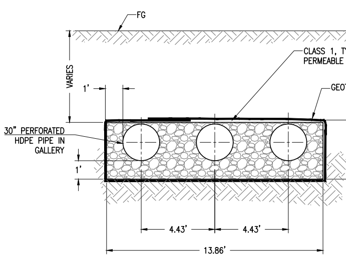



SET GRATES TO CONFORM TO STREET CROSS SLOPE
NEENAH MODEL R-4999-DX TYPE C GRATE (BICYCLE SAFE, BOLT DOWN) (OR EQUAL) 3-24" SECTIONS
NEENAH TYPE X FRAME OR EQUAL
#4 @ 12" OC
DRAIN INLET GRATE
#4-2 EA
13"
15"
12" MIN
18"
6"
8" CORE
OPENING SEE NOTES
FACE OF DRAIN INLET
#4 @ 12" OC
8" CLASS 2 AB @ 95% MDD
SECTION A-A
TIE IN TO NEW DRAIN INLET SHOWN

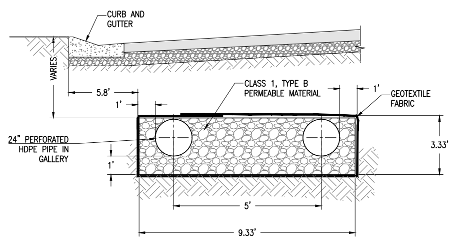
NOTES:

1. WHEN INSTALLING TRANSVERSE DRAIN ON EXISTING INLET. DRILL AND EPOXY #4 x5" (TOP) AND #4x12" (SIDE AND BOTTOM) DOWELS 3" INTO EXISTING INLET BOX @ 5" O.C. TIE TO HORIZONTAL TRANSVERSE DRAIN REBAR.

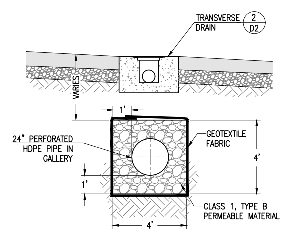
2/D2 TRANSVERSE DRAIN
NTS



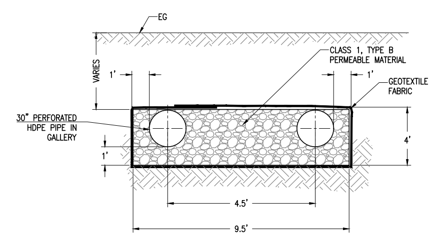
WEST INFILTRATION GALLERY



SOUTH INFILTRATION GALLERY



INFILTRATION GALLERY AT TRANSVERSE DRAIN



EAST INFILTRATION GALLERY

NOTE:
1. SEE DETAIL 3/D3 FOR TRENCH AND BACKFILL REQUIREMENTS.

3/D2 INFILTRATION GALLERY
NTS

PRELIMINARY
FOR REVIEW
NOT FOR CONSTRUCTION
DATE: 01-31-2023

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Reno, Nevada 89509
(775) 329-4955 * Fax (775) 329-5098

MICHAEL LEFRANCOIS, Exp. 12/31/23, CIVIL, No. 20115, STATE OF NEVADA, PROFESSIONAL ENGINEER — 1-31-23

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

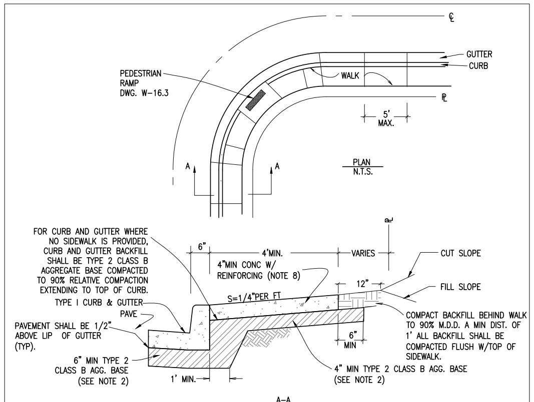
NO.	DATE	DESCRIPTION

PROJECT NO:	1171.01.25
DESIGNED BY:	KH
DRAWN BY:	KH
CHECKED BY: --	DATE --
DATE:	01-31-2023

SHEET TITLE

DETAILS

DRAWING
D2

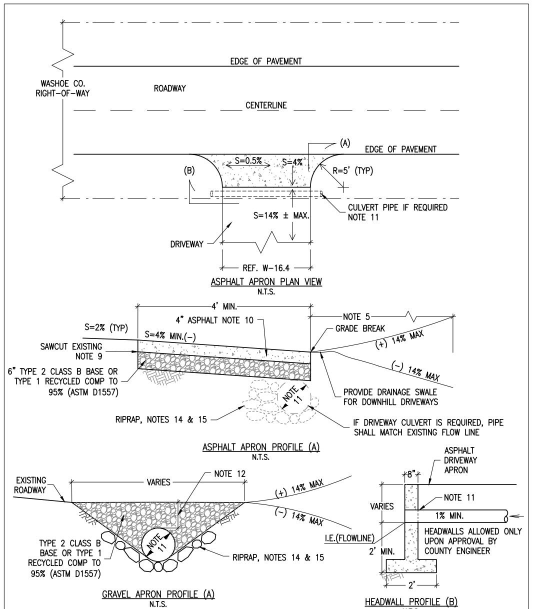


NOTES

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL MEET THE FOLLOWING SPECIFICATIONS; 4,000 PSI MIN. COMPRESSIVE STRENTH @ 28 DAYS W/ MIN. 6.25 SACKS OF TYPE II CEMENT (588 LBS) PER CUBIC YARD OF CONCRETE; WATER/CEMENT RATIO 0.45 MAX; AIR ENTRAINMENT SHALL BE 4.5% – 7.5%; SLUMP SHALL RANGE FROM 1" MIN TO 4" MAX. ALL MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).
2. AGGREGATE BASE SHALL BE TYPE 2 CLASS B COMPACTED TO 95% MINIMUM RELATIVE COMPACTION PER ASTM D-1557.
3. EVAPORATION REDUCERS (SUCH AS CONFLIM) SHALL BE APPLIED IMMEDIATELY AFTER INITIAL CURING.
4. FINISHING AND CURING SHALL CONFORM TO REQUIREMENTS OF THE LATEST EDITION OF THE SSPWC.
5. TESTING SHALL CONFORM TO REQUIREMENTS OF THE LATEST EDITION OF THE SSPWC.
6. SIDEWALK REMOVAL SHALL BE TO NEAT SAW-CUT-LINES.
7. NO EQUIPMENT SHALL BE PERMITTED ADJACENT TO OR ACROSS THE SIDEWALK UNTIL THE FOURTH DAY FOLLOWING PLACEMENT OF THE CONCRETE OR UNTIL THE CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
8. REINFORCING SHALL CONSIST OF COLLATED, FIBRILLATED, POLYPROPYLENE FIBERS AS MANUFACTURED BY FIBERMESH OR APPROVED EQUAL AND SHALL BE ADDED AT A RATE OF 11/2 LBS PER CUBIC YARD OF CONCRETE.
9. SUBGRADE SHALL BE COMPACTED TO 90% MIN RELATIVE COMPACTION. IF EXPANSIVE OR UNSUITABLE MATERIALS ARE ENCOUNTERED AT SUBGRADE ELEVATION, THE SOILS SHALL BE OVER-EXCAVATED TO CONFORM TO THE SOILS REPORT OR REQUIREMENTS OF WASHOE COUNTY. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY WASHOE COUNTY PRIOR TO PLACEMENT OF AGGREGATE BASE.
10. SIDEWALK SHALL RECEIVE A LIGHT BROOM FINISH.
11. SEE ROADWAY SECTIONS FOR SIDEWALK WIDTHS

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
1	REDRAWN	2/94vp	P.C.C. SIDEWALK	DRAWING NO: W-16.2
2	Notes	11/11sw		
3	Revision	8/16ww		DATE: 08/16ww PAGE: 30

1 D3 SIDEWALK
NTS



SEE PAGE 2 OF 2 FOR NOTES

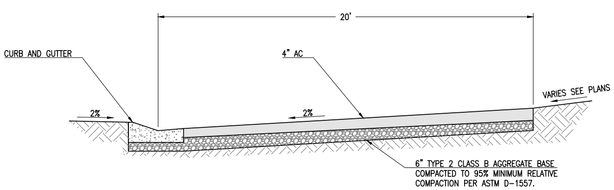
NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
1	Notes	12/11 SW	ASPHALT AND GRAVEL DRIVEWAY APRONS PAGE 1 OF 2 FOR USE WHERE NO CURB & GUTTER EXISTS	DRAWING NO: W-5.2
2	Notes & DWG	2/17 BD		
3	Notes & DWG	12/18 BD		DATE: 12/18 PAGE: 1

NOTES

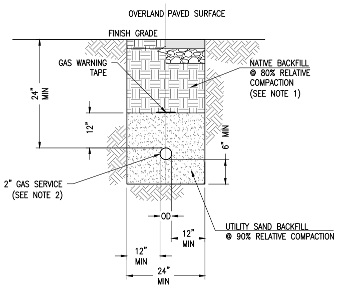
1. ENCROACHMENT / EXCAVATION PERMIT AND/OR A REVOCABLE OCCUPANCY PERMIT SHALL BE OBTAINED FROM THE WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT PRIOR TO ANY WORK.
2. THE MAXIMUM SLOPE ON DRIVEWAYS SHALL NOT EXCEED 14%.
3. SUBGRADE SHALL BE OVER-EXCAVATED IN AREAS DETERMINED UNSTABLE, UNSUITABLE OR TO HAVE EXPANSIVE SOILS TO CONFORM WITH THE SOILS REPORT OR WASHOE COUNTY REQUIREMENTS.
4. ALL WORK SHALL MEET THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
5. WHEN GRADE DIFFERENTIAL BETWEEN DRIVEWAY APRON AND ASPHALT EXCEEDS 6%, PROVIDE MINIMUM 6 FOOT VERTICAL CURVE TRANSITION BETWEEN BACK EDGE OF APRON AND DRIVEWAY.
6. NO PORTION OF THE DRIVEWAY SHALL BE PERMITTED WITHIN 5 FEET OF A PROPERTY LINE.
7. A MINIMUM OF 50 FEET MUST SEPARATE DRIVEWAY APPROACHES, CENTERLINE TO CENTERLINE, FOR CIRCULAR DRIVEWAYS ON ONE PROPERTY AS APPROVED BY THE COUNTY ENGINEER.
8. DRIVEWAY GEOMETRICS SHALL REFER TO THE WASHOE COUNTY STANDARD DETAIL W-16.4. CONCRETE DRIVEWAY APRONS SHALL REFER TO THE WASHOE COUNTY STANDARD DETAIL W-5.11.
9. MATCH WITH A NEAT LINE ALONG THE EXISTING EDGE OF PAVEMENT. SAWCUT A MINIMAL DISTANCE FROM THE EDGE AS NEEDED TO OBTAIN A SMOOTH MATCH LINE WITH A FULL DEPTH VERTICAL EDGE.
10. HOT MIX ASPHALT SHALL BE TYPE 3, PG64-28 (OR COUNTY APPROVED EQUIVALENT), 3% VOIDS, 50 BLOWS PER SIDE MIX WITH 1.5% LIME AND NO MORE THAN 15% RECYCLED ASPHALT PAVEMENT COMPACTED TO A MINIMUM OF 93% RICE RELATIVE COMPACTION.
11. MINIMUM SIZE CULVERT PIPE SHALL BE DETERMINED BY THE COUNTY ENGINEER. CULVERT PIPE IS TO BE ROUND OR ELLIPTICAL AND EITHER REINFORCED CONCRETE PIPE (RCP), GALVANIZED CORRUGATED METAL PIPE (CMP), OR HIGH DENSITY POLYETHYLENE (HDPE) MINIMUM CLASS S MEETING REQUIREMENTS OF AASHTO M294.
12. CULVERT PIPE INSTALLATION AND SOIL COVER DEPTH SHALL BE PER THE PIPE MANUFACTURER'S RECOMMENDATIONS. SOIL COVER SHALL BE TYPE 2 CLASS B AGGREGATE BASE OR TYPE 1 RECYCLED AGGREGATE BASE.
13. CULVERT PIPE SHALL BE SLOPED TO MATCH EXISTING DITCH / ROAD GRADE OR 1% MINIMUM.
14. CULVERT PIPE SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE TOE OF FILL WITH A MINIMUM OF 2 FEET OF RIPRAP HORIZONTALLY PAST END OF PIPE.
15. CLASS 150 RIPRAP TO BE PLACED AT PIPE INLETS AND OUTLETS. INSTALLATION OF FLARED END SECTIONS AND HEADWALLS SHALL BE DETERMINED BY THE COUNTY ENGINEER.
16. NO CONCRETE OR PAVER DRIVEWAYS ARE ALLOWED WITHIN 4 FEET OF THE EDGE OF PAVEMENT.
17. HYDRONIC OR HEATED DRIVEWAYS LOCATED WITHIN THE RIGHT-OF-WAY SHALL BE ON A SEPARATE STATION.
18. WASHOE COUNTY SHALL NOT BE RESPONSIBLE FOR MAINTENANCE OF DRIVEWAY APRONS.
19. CURRENT AASHTO REQUIREMENTS FOR CLEAR ZONES SHALL BE MET.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
1	Notes	12/11 SW	ASPHALT AND GRAVEL DRIVEWAY APRON NOTES PAGE 2 OF 2 FOR USE WHERE NO CURB & GUTTER EXISTS	DRAWING NO: W-5.2
2	Notes & DWG	2/17 BD		
3	Notes & DWG	12/18 BD		DATE: 12/18 PAGE: 2

2 D3 AC DRIVEWAY APRON
NTS

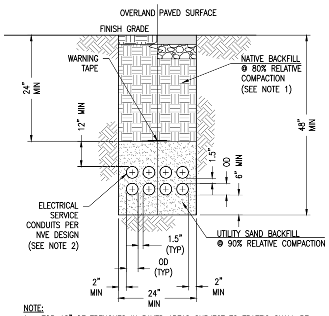


3 D3 EMERGENCY ACCESS / DRIVEWAY SECTION
NTS



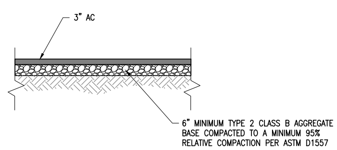
NOTE:
1. TOP 18" OF TRENCHES IN PAVED AREAS SUBJECT TO TRAFFIC SHALL BE BACKFILLED WITH TYPE 2 BASE AND COMPACTED TO 95% RELATIVE COMPACTION.
2. MAINTAIN 12" RADIAL CLEARANCE FROM ALL OTHER UTILITIES. EXCEPTION: MUST MAINTAIN A 2' RADIAL CLEARANCE FROM SEWER AND STORM DRAIN FACILITIES, AND SEPARATED BY VIRGIN SOIL DURING PARALLEL INSTALLATIONS

4 D3 GAS SERVICE TRENCH SECTION
NTS



NOTE:
1. TOP 18" OF TRENCHES IN PAVED AREAS SUBJECT TO TRAFFIC SHALL BE BACKFILLED WITH TYPE 2 BASE AND COMPACTED TO 95% RELATIVE COMPACTION.
2. MAINTAIN 12" RADIAL CLEARANCE FROM ALL OTHER UTILITIES. EXCEPTION: MUST MAINTAIN A 2' RADIAL CLEARANCE FROM SEWER, STORM DRAIN, AND WATER FACILITIES, AND SEPARATED BY VIRGIN SOIL DURING PARALLEL INSTALLATIONS

5 D3 ELECTRIC SERVICE TRENCH SECTION
NTS



6 D3 PAVEMENT PATCH
NTS

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MICHAEL LEFRANCOIS Exp.12/31/23 CIVIL No. 20115 STATE OF NEVADA PROFESSIONAL ENGINEER 1-31-23

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

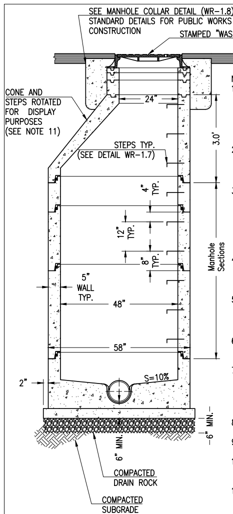
PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: __ DATE __
DATE: 01-31-2023

SHEET TITLE

DETAILS

DRAWING

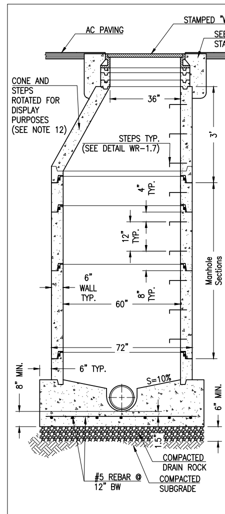
D3



NOTES:
1. TYPE I-A MANHOLE TO BE UTILIZED AS FOLLOWS:
   - PIPE 18" AND SMALLER
   - PIPE 24" AND SMALLER ON TANGENT LINE AND GRADE.
   - DEPTHS LESS THAN 18 FEET.
2. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
3. PORTLAND CEMENT CONCRETE TYPE II (PCC) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. 6 SACKS OF CEMENT PER CU.YD. SLUMP @ 1-4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
4. ALL MANHOLES SHALL INCLUDE PINKERTON A-107 FRAMES & COVER ASSEMBLIES, OR EQUAL, WITH "WASHOE COUNTY SEWER" CLEARLY STAMPED ON THE COVER.
5. EXCAVATION & BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION & BACKFILL" IN SECTION 305.00 OF THE SSPWC.
6. STEPS WILL BE REQUIRED ON ALL MANHOLES 5 FEET OR MORE IN DEPTH FROM FINISHED GRADE TO FLOW LINE.
7. PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE OF PRECAST MANHOLE BASES.
9. PIPE PENETRATIONS INTO MANHOLES SHALL BE WATER TIGHT.
10. PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER THE REQUIREMENTS OF ASTM C-1244.
11. WHEN POSSIBLE, CONSTRUCT MANHOLE SECTIONS SO THAT STEPS ARE OPPOSITE OUTLET.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
			MANHOLE TYPE I-A	DRAWING NO: WR-1.3
				DATE: 5/11 PAGE: 3

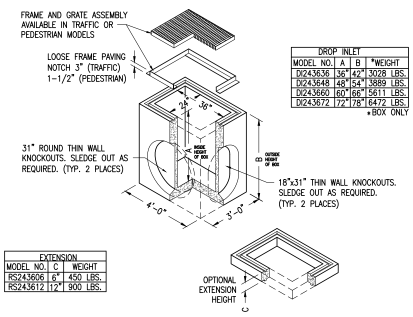
1 / D4 MANHOLE TYPE I-A
NTS



NOTES:
1. TYPE V-A MANHOLE TO BE UTILIZED AS FOLLOWS:
   - FOR PIPE GREATER THAN 18" THRU 27".
   - DEPTHS GREATER THAN 18 FEET.
2. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
3. PORTLAND CEMENT CONCRETE TYPE II (PCC) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. 6 SACKS OF CEMENT PER CU.YD. SLUMP @ 1-4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
4. ALL MANHOLES SHALL INCLUDE PINKERTON A-107 FRAMES & COVER ASSEMBLIES, OR EQUAL, WITH "WASHOE COUNTY SEWER" CLEARLY STAMPED ON THE COVER.
5. EXCAVATION & BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION & BACKFILL" IN SECTION 305.00 OF THE SSPWC.
6. STEPS WILL BE REQUIRED ON ALL MANHOLES 5 FEET OR MORE IN DEPTH FROM FINISHED GRADE TO FLOW LINE.
7. PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE OF PRECAST MANHOLE BASES.
9. PIPE PENETRATIONS INTO MANHOLES SHALL BE WATER TIGHT.
10. PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER THE REQUIREMENTS OF ASTM C-1244.
11. REINFORCING STEEL SHALL BE AS SHOWN, UNLESS OTHERWISE NOTED.
12. WHEN POSSIBLE, CONSTRUCT MANHOLE SECTIONS SO THAT STEPS ARE OPPOSITE OUTLET.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
			MANHOLE TYPE V-A	DRAWING NO: WR-1.6
				DATE: 7/09 PAGE: 6

2 / D4 MANHOLE TYPE V-A
NTS



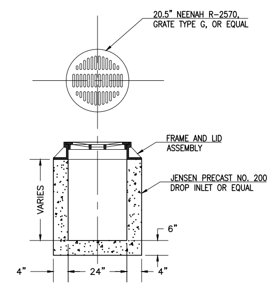
DROP INLET			
MODEL NO.	A	B	*WEIGHT
DI243636	36"	42"	3028 LBS.
DI243648	48"	54"	3889 LBS.
DI243660	60"	66"	5611 LBS.
DI243672	72"	78"	6472 LBS.

*BOX ONLY

EXTENSION		
MODEL NO.	C	WEIGHT
RS243606	6"	450 LBS.
RS243612	12"	900 LBS.

JENSEN PRECAST
JENSENPRECAST.COM

3 / D4 24"x36" DROP INLET
NTS



NOTES:
1. USE NEENAH R-2570, GRATE TYPE G OR EQUAL FOR STORM DRAIN INLETS.

4 / D4 AREA DRAIN
NTS

PRELIMINARY FOR REVIEW NOT FOR CONSTRUCTION DATE: 01-31-2023

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MICHAEL LEFRANCOIS, CIVIL, No. 20115, Exp. 12/31/23, STATE OF NEVADA, 1-31-23

947 TAHOE

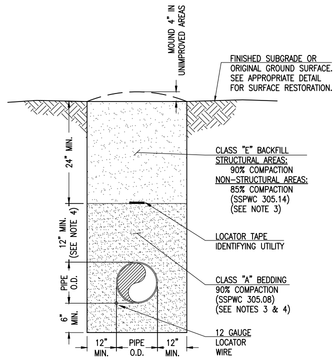
OWNER
PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

SHEET TITLE
STORM DRAIN DETAILS

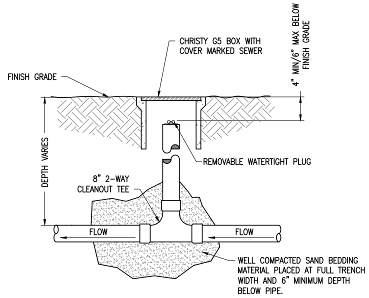
DRAWING
D4



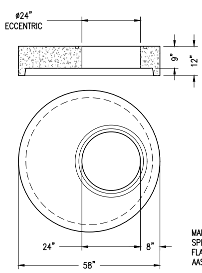
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," (SSPWC) LATEST EDITION.
2. ALL TRENCHING ACTIVITIES SHALL CONFORM TO O.S.H.A. REGULATIONS. (SSPWC 305.06)
3. COMPACTION SHALL BE PERCENT RELATIVE COMPACTION BASED ON THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 AND WITHIN ± 2% OF OPTIMUM MOISTURE CONTENT. (SSPWC 305.14)
4. IN HIGH GROUND WATER, CLASS "C" BEDDING TO HIGH GROUNDWATER MARK TOPPED WITH MIRAFI 140N FILTER FABRIC (OR APPROVED EQUAL) MAY BE USED IN LIEU OF CLASS "A", WITH THE APPROVAL OF THE ENGINEER.

1 / D5 TRENCH DETAIL – SANITARY SEWER
NTS



2 / D5 SANITARY SEWER CLEANOUT
NTS

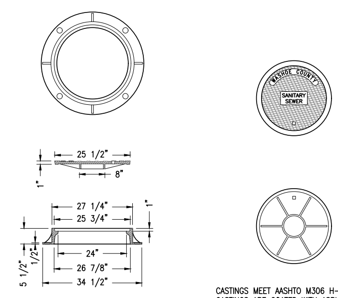


MANHOLE DETAIL TO BE ADDED AT FUTURE DATE

MANHOLE COMPONENTS CONFORM TO CURRENT SPECIFICATIONS, ASTM C-478 AND AASHTO M199. FLAT TOPS AND BASE SLABS ARE DESIGNED FOR AASHTO HS-20 WHEEL LOADING.

JENSEN PRECAST
JENSENPRECAST.COM

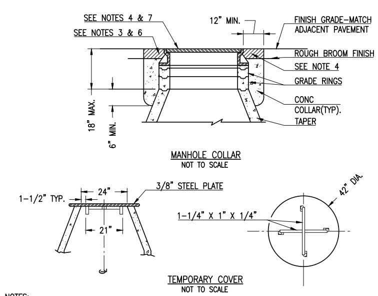
3 / D5 48" FLAT TOP MANHOLE
NTS



CASTINGS MEET AASHTO M306 H-20 LOADING. CASTINGS ARE COATED WITH ASPHALTIC BASED PAINT. APPROX. WEIGHT: 290 LBS.

JENSEN PRECAST
JENSENPRECAST.COM

4 / D5 MANHOLE FRAME AND COVER
NTS



MANHOLE COLLAR
NOT TO SCALE

TEMPORARY COVER
NOT TO SCALE

NOTES:
1. CONCRETE COLLAR TO BE PORTLAND CEMENT CONCRETE (PCC) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000PSI MIN. COMP STRENGTH @ 28 DAYS, MIN. 6 SACKS OF CEMENT PER CU.YD. WITH MAX WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ± 1.5%, SLUMP @ 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO SSPWC SEC. 202.
2. HEIGHT OF COLLAR SHALL BE CONSISTENT ALL AROUND MANHOLE.
3. MANHOLE RIM SHALL BE SET 3/8"-5/8" BELOW FINISH ROADWAY SURFACE. MANHOLES IN GRAVEL ACCESS ROADS SHALL BE SET FLUSH W/FINISH GRADE UNLESS OTHERWISE NOTED. MANHOLES IN UNIMPROVED AREAS SHALL BE SET 12"-18" ABOVE FINISHED GROUND.
4. CONCRETE COLLAR SHALL BE LEFT 2"-4" BELOW FINISH ASPHALT SURFACE. PLACE TYPE 3 A.C. PAVING AROUND MANHOLES TO MATCH ADJACENT PAVEMENT & APPLY SS-1 TACK COAT BEFORE PAVING, SEAL A.C. SURFACE W/SS-1 & SAND CHIP SEAL, SLURRY SEAL, SAND SEAL OR FOG SEAL PAVED SURFACE AS REQ'D BY PLANS OR SPECS. EXCEPTION – EXTEND CONC COLLAR TO FIN. GRADE WHEN NOT LOCATED IN ASPH PAVE OR IN AN UNPAVED AREA.
5. STEPS ARE REQ'D FOR SANITARY SEWER/STORM DRAIN MANHOLES OF 5 FEET OR GREATER DEPTH FROM FINISHED GRADE TO FLOW LINE.
6. MANHOLES THAT INDICATE AN ELEVATED FINISHED LID SHALL EITHER HAVE A CONCRETE COLLAR AS SHOWN ABOVE OR SHALL BOLT THE RIM AND GRADE RINGS TO THE CONE SECTION.
7. MANHOLE COVER TO CLEARLY STATE "WASHOE COUNTY SEWER"
8. MANHOLE COLLARS INSTALLED IN THE CITY OF RENO OR SPARKS ROADWAYS SHALL BE BROUGHT TO GRADE ACCORDING TO THE RESPECTIVE REGULATIONS.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE	
			MANHOLE COLLAR	DRAWING NO: WR-1.8	
				DATE: 7/09	PAGE: 8

5 / D5 MANHOLE COLLAR
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PROFESSIONAL ENGINEER STATE OF NEVADA
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1-31-23

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NO.	DATE	DESCRIPTION

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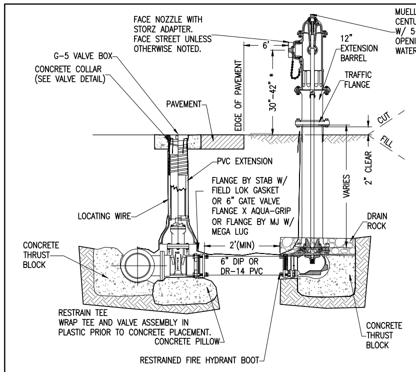
DRAWN BY:	KH
CHECKED BY: --	DATE: --
DATE:	01-31-2023

SHEET TITLE

SANITARY SEWER DETAILS

DRAWING

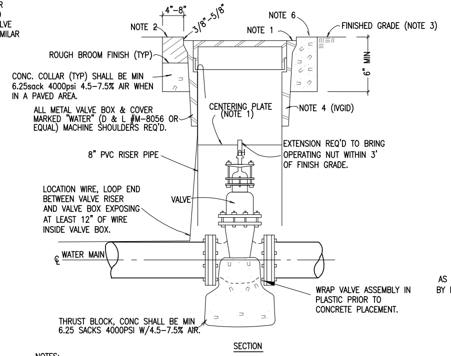
D5



FACE NOZZLE WITH STORZ ADAPTER. FACE STREET UNLESS OTHERWISE NOTED.
MUELLER SUPER CENTURION 250 W/ 5-1/4" VALVE OPENING OR SIMILAR WATEROUS
G-5 VALVE BOX
CONCRETE COLLAR (SEE VALVE DETAIL)
12" EXTENSION BARREL
TRAFFIC FLANGE
PAVEMENT
EDGE OF PAVEMENT
30"-42"
CUT
FILL
PVC EXTENSION
FLANGE BY STAB W/ FIELD LOK GASKET OR 6" GATE VALVE FLANGE X AQUA-GRIP OR FLANGE BY MJ W/ MEGA LUG
VARIES
2' CLEAR
LOCATING WIRE
DRAIN ROCK
2'(MIN)
CONCRETE THRUST BLOCK
6" DIP OR DR-14 PVC
RESTRAIN TEE
WRAP TEE AND VALVE ASSEMBLY IN PLASTIC PRIOR TO CONCRETE PLACEMENT.
CONCRETE PILLOW
CONCRETE THRUST BLOCK
RESTRAINED FIRE HYDRANT BOOT

NOTES:
1. HYDRANTS SHALL BE ENAMELED RED.
2. ALL HYDRANTS SHALL HAVE (2) 2-1/2" HOSE NOZZLES AND (1) 4-1/2" STEAMER NOZZLE. ALL THREADS SHALL BE NATIONAL STANDARD.
3. OPERATING NUT SHALL BE 1-1/2" PENTAGON.
4. HYDRANT W/ AQUA-GRIP SHOE OR STAB W/FIELD LOK GASKET
5. CONFIRM HYDRANT LOCATION WITH NLTFPD AND IVGID PRIOR TO PLACEMENT
6. TWO (2) BOLLARDS ARE REQUIRED. LOCATION AS DETERMINED IN FIELD BY NLTFPD AND IVGID.
7. * DISTANCE ABOVE CURB WHERE EXISTS
8. SEE TRENCH DETAIL FOR BACKFILL REQUIREMENTS.

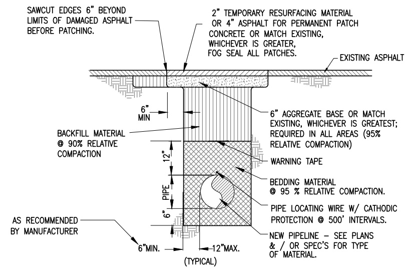
1/D6 FIRE HYDRANT ASSEMBLY
NTS



4"-8"
NOTE 2
3/8"-5/8"
NOTE 6
NOTE 1
FINISHED GRADE (NOTE 3)
ROUGH BROOM FINISH (TYP)
6" MIN
CONC. COLLAR (TYP) SHALL BE MIN 6.25sack 4000psi 4.5-7.5% AIR WHEN IN A PAVED AREA.
ALL METAL VALVE BOX & COVER MARKED "WATER" (D & L #M-8056 OR EQUAL) MACHINE SHOULDERS REQ'D.
CENTERING PLATE (NOTE 1)
NOTE 4 (IVGID)
8" PVC RISER PIPE
EXTENSION REQ'D TO BRING OPERATING NUT WITHIN 3' OF FINISH GRADE.
LOCATION WIRE, LOOP END BETWEEN VALVE RISER AND VALVE BOX EXPOSING AT LEAST 12" OF WIRE INSIDE VALVE BOX.
VALVE
WATER MAIN
WRAP VALVE ASSEMBLY IN PLASTIC PRIOR TO CONCRETE PLACEMENT.
THRUST BLOCK, CONC SHALL BE MIN 6.25 SACKS 4000PSI W/4.5-7.5% AIR.
SECTION

NOTES:
1. VALVE BOXES FOR WATER TO BE SET 3/8" - 5/8" BELOW FINISH ROADWAY SURFACE. WHEN OPERATING NUT IS AT GREATER DEPTH THAN 4' FROM FINISH GRADE INSTALL OPERATING EXTENSION W/OPERATING NUT RESTRAINING BOLT & TOP CENTERING PLATE.
2. CONC COLLAR TO BE LEFT 2" BELOW FINISH ASPH SURFACE. PLACE 2" OF TYPE 3 ASPH PAVING AROUND VALVE BOX, APPLY SS-1 TACK COAT BEFORE PAVING. SEAL A.C. SURFACE W/SS-1 & SAND BROOMED-IN. CHIP SEAL, SAND SEAL OR SLURRY SEAL PVAED SURFACE AS REQ'D BY PLANS OR SPECS. EXTEND CONC COLLAR TO FIN. GRADE WHEN NOT LOCATED IN ASPH PAVE OR IN UNPAVED AREA.
3. THE ORIGINAL FINISHED GRADE SHALL BE MAINTAINED AT ALL TIMES. (i.e: ANY A.C. CURLING ALONG FINISHED GRADE EDGE SHALL BE CORRECTED) ONLY THE ASPH COLLAR SHALL BE LEVEL W/FIN GRADE.
4. INCLINE VILLAGE GENERAL IMPROVEMENT DIST. (IVGID): WATER VALVE BOX SHALL BE CHRISTY G-5.
5. ONLY CIRCULAR TYPE CUTTING PERMITTED TO RAISE UTILITIES, i.e:NO RECTANGULAR TYPE SAW-CUTTING ALLOWED.
6. CONCRETE COLLAR TO FINISHED GRADE IN NDOT R.O.W. AND NON-PAVED AREAS.

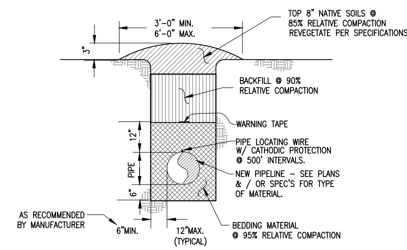
2/D6 VALVE INSTALLATION
NTS



SAWCUT EDGES 6" BEYOND LIMITS OF DAMAGED ASPHALT BEFORE PATCHING.
2" TEMPORARY RESURFACING MATERIAL OR 4" ASPHALT FOR PERMANENT PATCH CONCRETE OR MATCH EXISTING, WHICHEVER IS GREATER, FOG SEAL ALL PATCHES.
EXISTING ASPHALT
6" MIN
BACKFILL MATERIAL @ 90% RELATIVE COMPACTION
6" AGGREGATE BASE OR MATCH EXISTING, WHICHEVER IS GREATEST; REQUIRED IN ALL AREAS (95% RELATIVE COMPACTION)
WARNING TAPE
BEDDING MATERIAL @ 95 % RELATIVE COMPACTION.
PIPE LOCATING WIRE W/ CATHODIC PROTECTION @ 500' INTERVALS.
AS RECOMMENDED BY MANUFACTURER
NEW PIPELINE - SEE PLANS & / OR SPEC'S FOR TYPE OF MATERIAL.
6"MIN.
12"MAX.
(TYPICAL)

NOTES
1. COVER TO BE A MINIMUM OF 40 INCHES FROM TOP OF PIPE TO FINISHED SURFACE GRADE.
2. BOTTOM OF TRENCH SHALL BE LEVEL AND SMOOTH.
3. EXCAVATED AS NEEDED TO MAINTAIN 6" MINIMUM BEDDING UNDER PIPE AT COUPLINGS AND HUBS OF FITTINGS.
4. ALL BEDDING MATERIAL SHALL BE COMPACTED PRIOR TO SHAPING TRENCH & INSTALLATION OF PIPE.
5. ALL PROTRUDING ROCKS TO BE REMOVED.
6. IF SAWCUT IS WITHIN 36" OF EDGE OF: PAVEMENT, VALLEY GUTTER, CURB & GUTTER, OR PREVIOUS PATCH; REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE THE ENTIRE SECTION.
7. ALL TGREANCHES TO BE "COLD PATCHED" WITHIN 24 HRS. AFTER BACKFILLING IS COMPLETED OR COVERED WITH STEEL PLATES AND BARRICADED TO SATISFACTION OF WASHOE COUNTY AND OWNER.

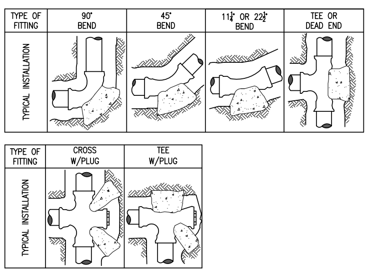
3/D6 TRENCH DETAIL - PAVED AREA
NTS



3'-0" MIN.
6'-0" MAX.
TOP 8" NATIVE SOILS @ 85% RELATIVE COMPACTION REVEGETATE PER SPECIFICATIONS.
BACKFILL @ 90% RELATIVE COMPACTION
WARNING TAPE
PIPE LOCATING WIRE W/ CATHODIC PROTECTION @ 500' INTERVALS.
NEW PIPELINE - SEE PLANS & / OR SPEC'S FOR TYPE OF MATERIAL.
AS RECOMMENDED BY MANUFACTURER
6"MIN.
12"MAX.
(TYPICAL)
BEDDING MATERIAL @ 95% RELATIVE COMPACTION

NOTES:
1. COVER TO BE MINIMUM OF 40 INCHES FROM TOP OF PIPE TO FINISHED SURFACE GRADE.
2. BOTTOM OF TRENCH SHALL BE LEVEL AND SMOOTH.
3. EXCAVATE AS NEEDED TO MAINTAIN 6" MINIMUM BEDDING UNDER PIPE AT COUPLINGS AND HUBS OF FITTINGS.
4. ALL BEDDING MATERIAL SHALL BE COMPACTED PRIOR TO SHAPING TRENCH & INSTALLATION OF PIPE.
5. ALL PROTRUDING ROCKS TO BE REMOVED.

4/D6 TRENCH DETAIL - UNPAVED AREA
NTS



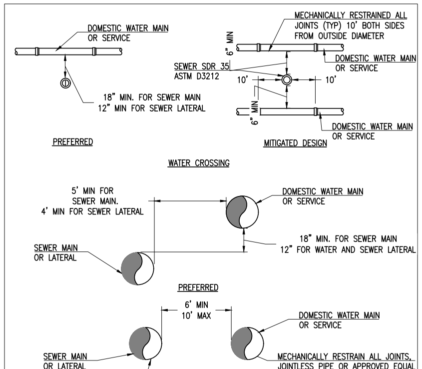
MINIMUM THRUST BLOCK BEARING AREA (SQ. FT.) - SEE NOTE 2

TYPE OF FITTING		90° BEND	45° BEND	11¼° OR 22½° BEND	TEE OR DEAD END	TEE W/PLUG	CROSS W/PLUG	INLINE VALVE
SIZE OF PIPE	4"	2	1	1	2	2	2	1
	6"	4	4	2	4	4	4	2
	8"	7	4	2	5	7	7	2
	10"	12	6	3	8	12	12	3
	12"	16	10	5	12	16	16	5
	14"	20	12	6	14	20	20	6
	16"	27	15	8	18	27	27	8
	18"	45	25	13	32	45	45	13
	24"	65	35	18	48	65	65	18

NOTES:
1. THRUST BLOCKS TO BE CONSTRUCTED OF 4000 PSI CONCRETE PER SECTION 202.04 OF THE SSPWC.
2. MINIMUM AREAS GIVEN ARE FOR PRESSURE CLASS 235 PIPE AT TEST PRESSURE OF 150 P.S.I., WITH 2000 P.S.I. BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND/OR SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL OF ENGINEER.
3. BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.
4. JOINTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE.
5. WRAP ALL FITTINGS WITH POLY WRAP PRIOR TO CONCRETE PLACEMENT.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
			THRUST RESTRAINT	DRAWING NO: WR-2.12
				DATE: 8/12 PAGE: 25

5/D6 THRUST RESTRAINT
NTS



DOMESTIC WATER MAIN OR SERVICE
MECHANICALLY RESTRAINED ALL JOINTS (TYP) 10' BOTH SIDES FROM OUTSIDE DIAMETER
SEWER SDR 35 ASTM D3212
6" MIN
10'
10'
DOMESTIC WATER MAIN OR SERVICE
18" MIN. FOR SEWER MAIN
12" MIN FOR SEWER LATERAL
PREFERRED
MITIGATED DESIGN
WATER CROSSING
5' MIN FOR SEWER MAIN.
4' MIN FOR SEWER LATERAL
DOMESTIC WATER MAIN OR SERVICE
SEWER MAIN OR LATERAL
18" MIN. FOR SEWER MAIN
12" FOR WATER AND SEWER LATERAL
PREFERRED
6' MIN
10' MAX
DOMESTIC WATER MAIN OR SERVICE
SEWER MAIN OR LATERAL
MECHANICALLY RESTRAIN ALL JOINTS, JOINTLESS PIPE OR APPROVED EQUAL

NON- PRESSURIZED PIPE: SDR 35 (ASTM D3212), EXTERNAL JOINT SEALANT (ASTM C877), JOINTLESS PIPE OR APPROVED EQUAL
PRESSURIZED PIPE: MECHANICALLY RESTRAIN ALL JOINTS, JOINTLESS PIPE OR APPROVED EQUAL

Notes:
1. A SEWER IS ANY NON-POTABLE LINE INCLUDING BUT NOT LIMITED TO MAINS AND LATERALS OF SANITARY SEWER, STORM DRAINS, PRESSURIZED FORCE MAINS AND RECLAIMED WASTEWATER.
2. MITIGATED CROSSING DESIGN CAN UTILIZE JOINTLESS PIPE PER SSPWC OR BSDW APPROVED EQUAL FOR WATER AND SEWER. NON-SDR 35 (ASTM D3212) SEWER PIPE MAY UTILIZE JOINTLESS PIPE OR APPROVED JOINT SEALANT MEETING ASTM C877.
3. NO VERTICAL SEPERATION IS REQUIRED IF THERE IS 10 FEET OR MORE SEPARATION BETWEEN WATER AND SEWER LINES.

MITIGATED DESIGN
DOMESTIC WATER PARALLEL SEPARATION

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
			WATER & SEWER SEPARATIONS DETAIL	DRAWING NO: WR-2.2.1
				DATE: 1/14 PAGE: 11

WATER CROSSING SEWER

TYPICAL SPECIAL PROTECTION FOR WATER LINE CROSSING WITH SEWER LINE
A SEWER IS ANY NON-POTABLE LINE INCLUDING BUT NOT LIMITED TO MAINS AND LATERALS OF SANITARY SEWER, STORM DRAINS, PRESSURIZED FORCE MAINS AND RECLAIMED WASTEWATER.

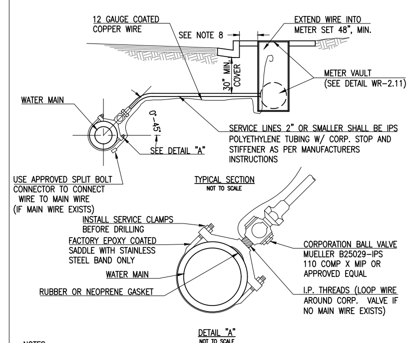
WATER MAIN CROSSING WITH RCP STORM DRAIN
WATER MAIN MUST CROSS A MINIMUM OF 18" ABOVE A RCP STORM DRAIN. IF THIS IS IMPRACTICAL AND IF THE STORM DRAIN CROSSES ABOVE, OR BELOW BY LESS THAN 18", THE FOLLOWING SPECIAL CONSTRUCTION METHODS MAY BE USED:
A MINIMUM OF 6" SEPARATION FROM OD TO OD, CONSTRUCT STORM DRAIN OF JOINTLESS PIPE OR RUBBER GASKET JOINTS CONFORMING TO ASTM C443 AND ASTM C1619 OR APPROVED JOINT SEALANT MEETING ASTM C877, AND CONSTRUCT WATER WITH MECHANICALLY RESTRAINED JOINTS WITHIN 10' OF OD OF CROSSING OR UTILIZE JOINTLESS PIPE OR BSDW EQUAL.

WATER MAIN CROSSING WITH SEWER MAIN OR LATERAL
WATER MAIN MUST CROSS A MINIMUM OF 18" ABOVE A SANITARY SEWER MAIN OR 12" ABOVE A SEWER LATERAL. IF THIS IS IMPRACTICAL AND IF THE SEWER MAIN OR LATERAL CROSS ABOVE, OR BELOW THE WATER MAIN AT LESS THAN THE ABOVE DISTANCES , THE FOLLOWING SPECIAL CONSTRUCTION METHODS MAY BE USED:
A. A MINIMUM OF 6" SEPARATION FROM OD TO OD,
B. CONSTRUCT SEWER OF SDR35 PVC (ASTM D3212) OR JOINTLESS PIPE OR RUBBER GASKET JOINTS CONFORMING TO ASTM C443 AND ASTM C1619 OR APPROVED JOINT SEALANT MEETING ASTM C877, OR
C. IF THE SEWER IS PRESSURIZED, MECHANICALLY RESTRAIN SEWER JOINTS WITHIN 10' FROM OD TO OD OR JOINTLESS PIPE WITH NO JOINTS WITHIN 10' FROM OD TO OD OR OTHER BSDW APPROVED ALTERNATIVE, AND
D. CONSTRUCT WATER WITH MECHANICALLY RESTRAINED JOINTS WITHIN 10' OF OD OF CROSSING OR UTILIZE JOINTLESS PIPE OR BSDW EQUAL.

WATER SERVICE CROSSING WITH SEWER MAIN
WATER SERVICE MUST CROSS A MINIMUM OF 18" ABOVE A SEWER MAIN. IF THIS IS IMPRACTICAL AND IF THE SANITARY SEWER MAIN CROSSES ABOVE OR BELOW THE WATER SERVICE BY LESS THAN 18", THE FOLLOWING SPECIAL CONSTRUCTION METHODS MAY BE USED:
A. A MINIMUM OF 6" SEPARATION FROM OD TO OD,
B. CONSTRUCT SEWER OF SDR35 PVC (ASTM D3212) OR JOINTLESS PIPE OR RUBBER GASKET JOINTS CONFORMING TO ASTM C443 AND ASTM C1619 OR APPROVED JOINT SEALANT MEETING ASTM C877, OR
C. IF THE SEWER IS PRESSURIZED, MECHANICALLY RESTRAIN SEWER JOINTS WITHIN 10' FROM OD TO OD OR JOINTLESS PIPE WITH NO JOINTS WITHIN 10' FROM OD TO OD OR OTHER BSDW APPROVED ALTERNATIVE, AND
D. THE WATER SERVICE MUST BE JOINTLESS POLYETHYLENE (PE) PIPE CONFORMING TO AWWA C901 OR C906 AND SSPWC FOR POTABLE WATER PRESSURE PIPE.

GENERAL
THESE NOTES ARE PROVIDED IN THE INTEREST OF FACILITATING THE APPROVAL PROCESS, WITH RESPECT TO POTABLE VS. NON-POTABLE PIPELINE SEPARATION. IT IS IN NO WAY INTENDED TO REPLACE OR SUPERCEDE NEVADA ADMINISTRATIVE CODE (NAC) 445A.6715 THROUGH 445A.67175. THE METHODS LISTED HEREIN ARE GENERALLY CONSIDERED ACCEPTABLE ALTERNATIVES TO THE AFOREMENTIONED NAC "SEPARATION" SUBSECTIONS OF THE REGULATION.

6/D6 WATER & SEWER SEPARATIONS
NTS



12 GAUGE COATED COPPER WIRE
SEE NOTE 8
EXTEND WIRE INTO METER SET 48", MIN.
30" MIN. COVER
METER VAULT (SEE DETAIL WR-2.11)
WATER MAIN
SERVICE LINES 2" OR SMALLER SHALL BE IPS POLYETHYLENE TUBING W/ CORP. STOP AND STIFFENER AS PER MANUFACTURERS INSTRUCTIONS
SEE DETAIL "A"
USE APPROVED SPLIT BOLT CONNECTOR TO CONNECT WIRE TO MAIN WIRE (IF MAIN WIRE EXISTS)
TYPICAL SECTION
NOT TO SCALE
INSTALL SERVICE CLAMPS BEFORE DRILLING
FACTORY EPOXY COATED SADDLE WITH STAINLESS STEEL BAND ONLY
WATER MAIN
RUBBER OR NEOPRENE GASKET
CORPORATION BALL VALVE MUELLER B25029-IPS 110 COMP X MIP OR APPROVED EQUAL
I.P. THREADS (LOOP WIRE AROUND CORP. VALVE IF NO MAIN WIRE EXISTS)
DETAIL "A"
NOT TO SCALE

NOTES:
1. ALL SERVICE LINE COUPLING FITTINGS SHALL BE MUELLER IPS 110 COMP. X MIP OR APPROVED EQUAL.
2. ALL SERVICE VALVES SHALL BE SAME SIZE AS SERVICE LINES.
3. SERVICE CLAMPS SHALL BE FACTORY COATED EPOXY WITH STAINLESS STEEL BAND.
4. MINIMUM DISTANCE BETWEEN TAPS AND MAINLINE FITTING, INCLUDING BELLS SHALL BE 18".
5. ENTITY REQUESTING ABANDONMENT SHALL REMOVE EXISTING WATER BOX AND EXPOSE CORP. STOP FOR SHUT-OFF. ALL PLUMBING SHALL BE DISCONNECTED FROM CORP. AND PLUGGED AT BOTH ENDS. WATER UTILITY SHALL BE NOTIFIED FOR INSPECTION OF CORP. ASSEMBLY PRIOR TO BACKFILLING.
6. UPON ABANDONING OF SERVICE TAP, WATER UTILITY SHALL BE NOTIFIED SO THE METER CAN BE REMOVED.
7. TAPPING SADDLE MUST BE AT 45° ANGLE, EXCEPTIONS MUST BE APPROVED BY DWR.
8. ALL METER SETS TO BE PLACED A MAXIMUM OF 5' FROM BACK FACE OF CURB. IN AREAS WHERE NO CURB IS PRESENT, THE FRONT OF THE METER IS TO BE SET AS DIRECTED BY DWR.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
			WATER SERVICE TAP & LINE	DRAWING NO: WR-2.10
				DATE: 5/09 PAGE: 20

7/D6 WATER SERVICE TAP & LINE
NTS

PRELIMINARY FOR REVIEW NOT FOR CONSTRUCTION DATE: 01-31-2023

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(775) 329-4955 * Fax (775) 329-5098

PROFESSIONAL ENGINEER STATE OF NEVADA MICHAEL LEFRANCOIS Exp.12/31/23 CIVIL No. 20115 1-31-23

947 TAHOE

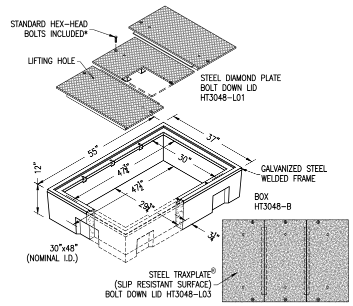
OWNER
PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

SHEET TITLE
WATER DETAILS

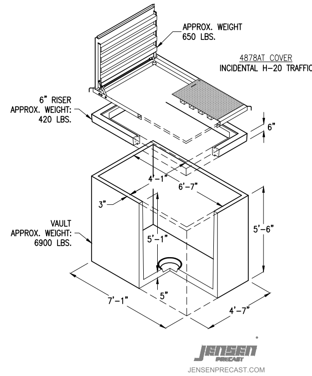
DRAWING
D6



PART NO.	PRODUCT	DESCRIPTION	APPROX. WEIGHT	QTY. PER PALLET
HT3048-B	BOX	30"x48"x12" CONCRETE TRAFFIC RATED BOX (COMES STANDARD WITH HEX BOLTS)	541	3
HT3048-E	EXTENSION	30"x48"x12" CONCRETE EXTENSION	568	3
HT3048-L01	LID	STEEL DIAMOND PLATE BOLT DOWN LID	331	
HT3048-L03	LID	STEEL TRAXPLATE® BOLT DOWN SLIP RESISTANT LID	331	
GALVANIZING AVAILABLE ON ALL STEEL LIDS				

JENSEN PRECAST
JENSENPRECAST.COM

1 / D7 HT3048 TRAFFIC BOX
NTS



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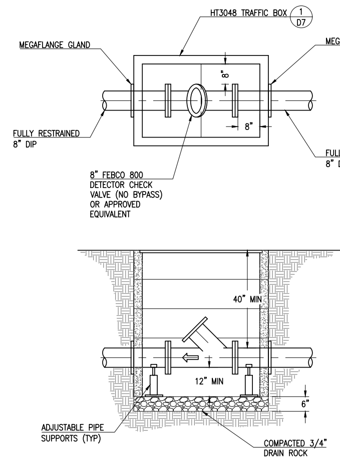
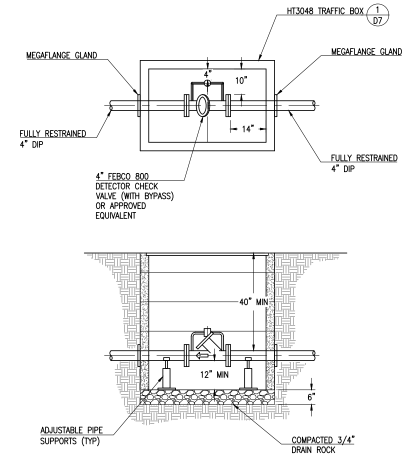
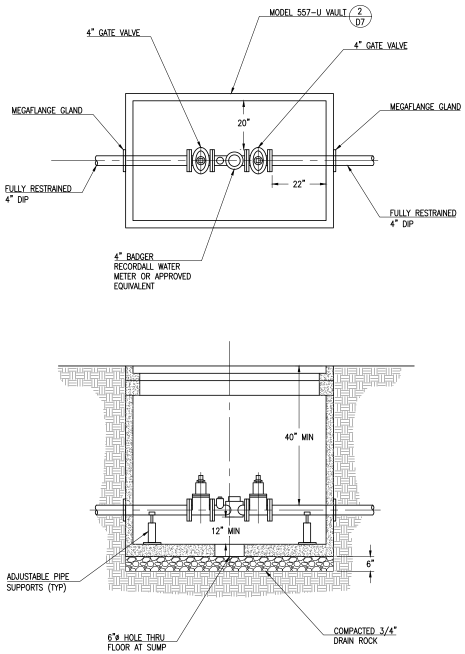
2 / D7 MODEL 557-U VAULT
NTS


HT3048 TRAFFIC BOX 1/D7
MEGAFLANGE GLAND
MEGAFLANGE GLAND
8"
8"
FULLY RESTRAINED 8" DIP
FULLY RESTRAINED 8" DIP
8" FEBCO 800 DETECTOR CHECK VALVE (NO BYPASS) OR APPROVED EQUIVALENT
40" MIN
12" MIN
6"
ADJUSTABLE PIPE SUPPORTS (TYP)
COMPACTED 3/4" DRAIN ROCK

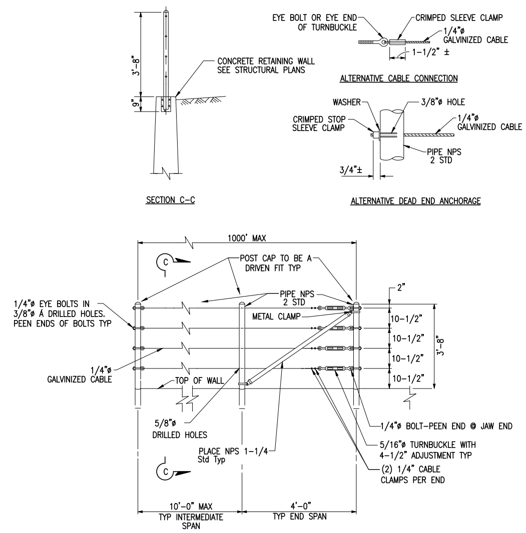
3 / D7 8" DETECTOR CHECK VALVE
NTS


HT3048 TRAFFIC BOX 1/D7
MEGAFLANGE GLAND
MEGAFLANGE GLAND
4"
10"
14"
FULLY RESTRAINED 4" DIP
FULLY RESTRAINED 4" DIP
4" FEBCO 800 DETECTOR CHECK VALVE (WITH BYPASS) OR APPROVED EQUIVALENT
40" MIN
12" MIN
6"
ADJUSTABLE PIPE SUPPORTS (TYP)
COMPACTED 3/4" DRAIN ROCK

4 / D7 4" DETECTOR CHECK VALVE
NTS


MODEL 557-U VAULT 2/D7
4" GATE VALVE
4" GATE VALVE
MEGAFLANGE GLAND
MEGAFLANGE GLAND
20"
22"
FULLY RESTRAINED 4" DIP
FULLY RESTRAINED 4" DIP
4" BADGER RECORDALL WATER METER OR APPROVED EQUIVALENT
40" MIN
12" MIN
6"
ADJUSTABLE PIPE SUPPORTS (TYP)
6"ø HOLE THRU FLOOR AT SUMP
COMPACTED 3/4" DRAIN ROCK

5 / D7 4" WATER METER
NTS


3'-8"
9"
CONCRETE RETAINING WALL SEE STRUCTURAL PLANS
SECTION C-C
EYE BOLT OR EYE END OF TURNBUCKLE
CRIMPED SLEEVE CLAMP
1/4"ø GALVINIZED CABLE
1-1/2" ±
ALTERNATIVE CABLE CONNECTION
WASHER
3/8"ø HOLE
CRIMPED STOP SLEEVE CLAMP
1/4"ø GALVINIZED CABLE
PIPE NPS 2 STD
3/4"±
ALTERNATIVE DEAD END ANCHORAGE
1000' MAX
POST CAP TO BE A DRIVEN FIT TYP
PIPE NPS 2 STD
METAL CLAMP
1/4"ø EYE BOLTS IN 3/8"ø A DRILLED HOLES. PEEN ENDS OF BOLTS TYP
1/4"ø GALVINIZED CABLE
TOP OF WALL
5/8"ø DRILLED HOLES
PLACE NPS 1-1/4 Std Typ
2"
10-1/2"
10-1/2"
10-1/2"
10-1/2"
3'-8"
1/4"ø BOLT-PEEN END @ JAW END
5/16"ø TURNBUCKLE WITH 4-1/2" ADJUSTMENT TYP
(2) 1/4" CABLE CLAMPS PER END
10'-0" MAX TYP INTERMEDIATE SPAN
4'-0" TYP END SPAN

NOTES:
1. MAXIMUM DISTANCE BETWEEN TURNBUCKLES SHALL BE 200'-0"±.
2. INTERMEDIATE TURNBUCKLES TO BE PLACED IN ADJACENT SPANS.
3. CABLE SHALL NOT BE SPLICED BETWEEN INTERMEDIATE TURNBUCKLES AND END POSTS.
4. POSTS TO BE VERTICAL.
5. ALIGNMENT OF HOLES IN POSTS MAY VARY TO CONFORM TO SLOPE OF TOP OF RETAINING WALL.
6. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.
7. LINE POSTS SHALL BE BRACED HORIZONTALLY AND TRUSSED DIAGONALLY IN BOTH DIRECTIONS AT INTERVALS NOT TO EXCEED 1000'.
8. POST POCKETS TO BE CENTERED IN TOP OF WALL.
9. TYPICAL END SPANS, BRACED IN BOTH DIRECTIONS, SHALL BE CONSTRUCTED AT CHANGES IN LINE WHERE THE ANGLE OF DEFLECTION IS 15° OR MORE.
10. PROVIDE THIMBLES AT ALL CABLE LOOPS.

6 / D7 CABLE RAILING
NTS

PRELIMINARY
FOR REVIEW
NOT FOR CONSTRUCTION
DATE: 01-31-2023

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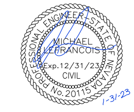


947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 01-31-2023

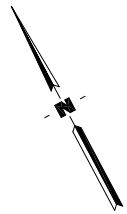
SHEET TITLE
DETAILS

DRAWING
D7

SHEET 15 OF 23

LEGEND

- ⌀ SET 5/8" REBAR W/CAP STAMPED PLS 7629
- • FOUND MONUMENT AS NOTED
- o DIMENSION POINT - NOTHING FOUND OR SET
- (1) GRANT DEED TO PALCAP FFIF TAHOE I, LLC, RECORDED IN DOC. NO. 5104654, WASHOE COUNTY OFFICIAL RECORDS.

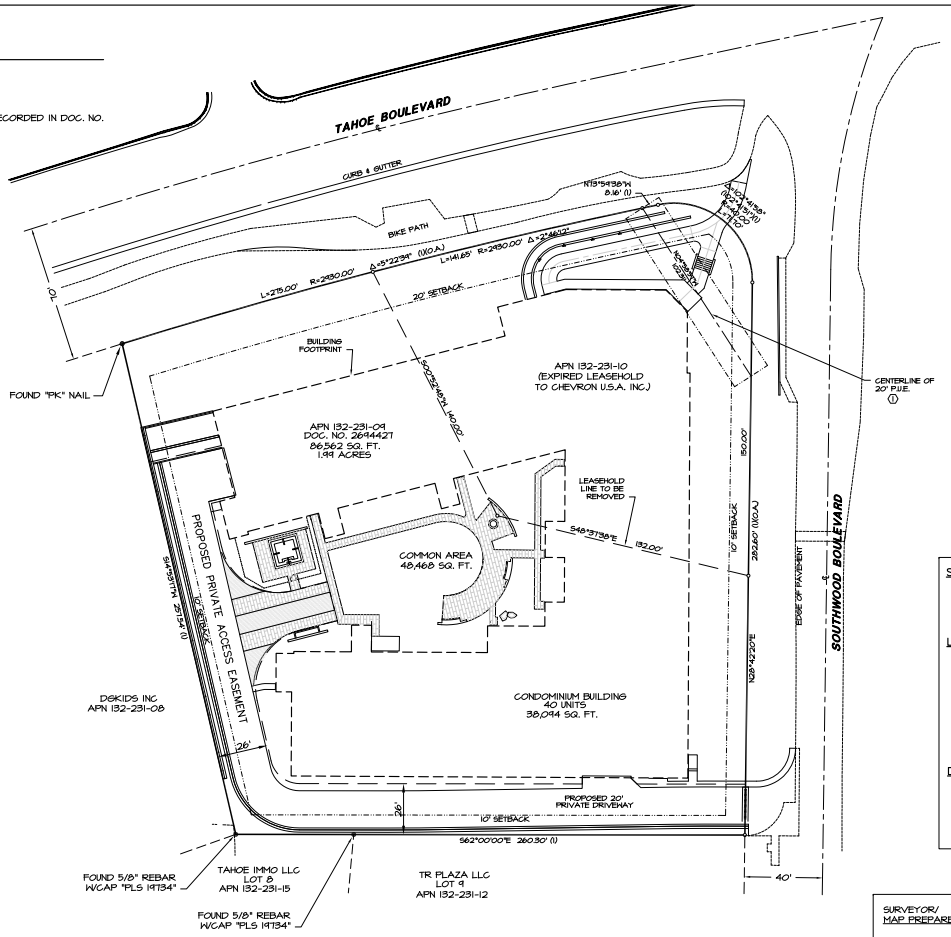


GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.



RECORD DOCUMENTS:

THIS SURVEY IS BASED ON THE LEGAL DESCRIPTION FURNISHED IN A PRELIMINARY TITLE REPORT BY SIGNATURE TITLE, ESCROW NO. LAKEVISH-110-CAI, DATED JANUARY 27, 2023.

THE FOLLOWING DOCUMENTS AFFECT THE PARCELS:

13. An easement as granted to Sierra Pacific Power Company and Bell Telephone Company of Nevada, to construct, operate and maintain electric power and communication lines and incidental purposes, by instrument recorded November 15, 1962, in Book 656, Page 313, as Document No. 311832, Deed Records. SAID EASEMENT APPEARS TO AFFECT A PORTION OF THE SOUTHEASTERLY RIGHT-OF-WAY OF SOUTHWOOD BLVD. AND DOES NOT ENCUMBER THE SUBJECT PARCEL.

14. Covenants, conditions and restrictions, as contained in a Deed recorded June 12, 1963, in Book 684, Page 168, as Document No. 386514, of Deed Records, Washoe County, Nevada but omitting any covenants or restrictions, if any, but not limited to those based on race, color, religion, sex, sexual orientation, familial status, marital status, disability handicap, national origin, ancestry, or source of income as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law. SEE DOCUMENT FOR PARTICULARS.

(1) 15. An easement for public utilities, and incidental purposes, as set forth in an instrument recorded June 12, 1963, in Book 684, Page 168, as Document No. 386514, Deed Records. SAID EASEMENT IS A STRIP OF LAND 20' IN WIDTH AS SHOWN HEREON.

16. The terms, covenants, conditions and provisions as contained in an instrument, entitled "Environmental Covenant", by and between GCM Air Group, LLC, a Nevada corporation as "Owner, Chevron Environmental Management Company ("EMC") and The State of Nevada, Department of Conservation and Natural Resources, Division of Environmental protection ("NDEP") (NDEP), Owner and EMC collectively recorded July 11, 2011 as Document No. 4112123, Official Records. SEE DOCUMENT FOR PARTICULARS.

GENERAL NOTES

1. THIS MAP IS IN SUBSTANTIAL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF THE WASHOE COUNTY DEVELOPMENT CODE.
2. SEE ENGINEERING CIVIL PLANS FOR GRADING, DRAINAGE, EROSION CONTROL AND TOPOGRAPHIC INFORMATION.
3. SEE SHEETS 2-4 OF 5 FOR UNIT BOUNDARY INFORMATION.
4. SEE SHEET 5 OF 5 FOR UNIT VERTICAL BOUNDARY INFORMATION.

BASIS OF BEARINGS AND COORDINATES

NORTH AMERICAN DATUM OF 1983/1994 (NAD 83/94), NEVADA STATE PLANE WEST ZONE AS DETERMINED WITH REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS, OBSERVED ON JULY 23, 2021, USING TRIMBLE R8 RECEIVER WITH CORRECTIONS RECEIVED FROM TRIMBLE R8 BASE STATION OCCUPYING NEVADA DEPARTMENT OF TRANSPORTATION CONTROL POINT "1583003A". ALL DIMENSIONS AND COORDINATES SHOWN ARE U.S. SURVEY FOOT GRID DISTANCES

"1583003A" STATE PLANE GRID COORDINATES, NV WEST ZONE
N - 14764350.80
E - 2238247.57

BASIS OF ELEVATION:

A FOUND MAG NAIL AT THE NORTHWEST CORNER OF 941 TAHOE BOULEVARD (APN: 132-231-09) AS SHOWN ON THE SITE PLAN PREPARED BY ARNETT & ASSOCIATES.
"MAG NAIL"
ELEVATION - 6406.00'

NOTES

1. THE COMMON ELEMENT (CE) IS THE ENTIRE SUBDIVISION SHOWN HEREON INCLUDING ALL LAND BENEATH, EXCLUDING ALL UNITS, BUT INCLUDING ALL LIMITED COMMON ELEMENTS (LCE). ALL COMMON ELEMENTS SHALL BE PRIVATELY MAINTAINED AND PERPETUALLY FUNDED BY THE HOMEOWNERS ASSOCIATION. THE TERM COMMON ELEMENT IS SYNONYMOUS WITH "COMMON AREA" AS DEFINED IN NRS 117.010.
2. EXCEPT WHERE OTHERWISE NOTED, SANITARY SEWER AND STORM WATER DRAINAGE FACILITIES ARE PRIVATELY MAINTAINED AND PERPETUALLY FUNDED BY THE OWNERS OF THE COMMON ELEMENT.
3. NO HABITABLE STRUCTURES SHALL BE LOCATED ON A FAULT THAT HAS BEEN ACTIVE DURING THE HOLOCENE EPOCH OF GEOLOGICAL TIME.
4. THE HOMEOWNERS ASSOCIATION SHALL MAINTAIN ALL WATER & SEWER LINES WITHIN THE SHOWN COMMON AREA TO THE CONNECTION TAP AT I.V.G.I.D.'S PUBLIC SEWER & WATER MAINS.
5. DETENTION/INFILTRATION AND OTHER STORM DRAINAGE FACILITIES, AS WELL AS THE COMMON AREA AND THE PRIVATE DRIVEWAYS SHALL BE PERPETUALLY FUNDED AND PRIVATELY MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

SITE INFORMATION

941 & 947 TAHOE BLVD.
INCLINE VILLAGE, NV
A.P.N. 132-231-09 & 10, WASHOE COUNTY, NEVADA
LANDS DESCRIBED IN DOC. NO. 5104654, WCOR

LAND USE INFORMATION

TOTAL LOT AREA: 86562 S.F. (1.99 ACRES)
COMMON AREA: 48,468 S.F. (1.11 ACRES)

LAND USE DESIGNATION: SPECIAL AREA 1 (TOWN CENTER) OF THE INCLINE VILLAGE COMMERCIAL (IVC) REGULATORY ZONE OF THE TAHOE AREA PLAN

ZONING: MFD (MULTI-FAMILY DWELLING)

SETBACKS: (PER TRPA CODE SECTION 36.5.4.A)
FRONT - 20'
SIDE - 10'
REAR - 10'

DENSITY

TOTAL LOT AREA: 86,560 S.F. (1.99 ACRES)
TOTAL PROPOSED RESIDENTIAL UNITS = 40
TOTAL PROPOSED COMMERCIAL UNITS = 1
PROPOSED DENSITY = 20 UNITS/ACRE
ALLOWABLE DENSITY: (MULTI-FAMILY DWELLING (MFD)
15 UNITS/ACRE MINIMUM
25 UNITS/ACRE MAXIMUM

SURVEYOR/ MAP PREPARER: ARNETT & ASSOCIATES, INC.
120 COUNTRY CLUB DR. NO. 13
INCLINE VILLAGE, NV 89451
PHONE: (775) 831-8618
KENNETH R. ARNETT, P.L.S.
KEN@ARNETTCONSULTANTS.COM

LANDOWNER: PAL CAP FFIF TAHOE I LLC
940 SOUTHWOOD BLVD., SUITE 101
INCLINE VILLAGE, NV 89451
PHONE: (775) 831-0188
KEVIN HANNA
KEVIN@GREENWOOD-HOMES.COM

CIVIL ENGINEER: NCE
1885 S. ARLINGTON AVE. SUITE 111
RENO, NV 89509
PHONE: (775) 568-2505 (X 234)
MICHAEL LEFRANCOIS, PE
MLEFRANCOIS@NCENET.COM

ARCHITECT: COLLABORATIVE DESIGN STUDIO
9444 DOUBLE R BLVD., SUITE B
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PHONE: (775) 348-7777
PETER GROVE, AIA
PETER@COLLABORATIVEDESIGNSTUDIO.COM

ATTORNEY: FELDMAN THIEL, LLP
625 U.S. HIGHWAY 50
ZEPHYR COVE, NV 89448
PHONE: (775) 580-7431
KARA THIEL
KARA@FMTTAHOE.COM

ARNETT & ASSOCIATES, INC.
LAND SURVEYORS + PLANNERS
120 COUNTRY CLUB DR., NO. 13 INCLINE VILLAGE, NV 89451

PROFESSIONAL LAND SURVEYOR KENNETH R. ARNETT 12/31/24 No. 7629 STATE OF NEVADA

947 TAHOE
A CONDOMINIUM

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION
	1/31/23	

PROJECT NO: 00-09-05
DESIGNED BY: KA
DRAWN BY: JT
CHECKED BY: -- DATE --
DATE: 12-01-2021

SHEET TITLE

TENTATIVE
SUBDIVISION MAP

DRAWING

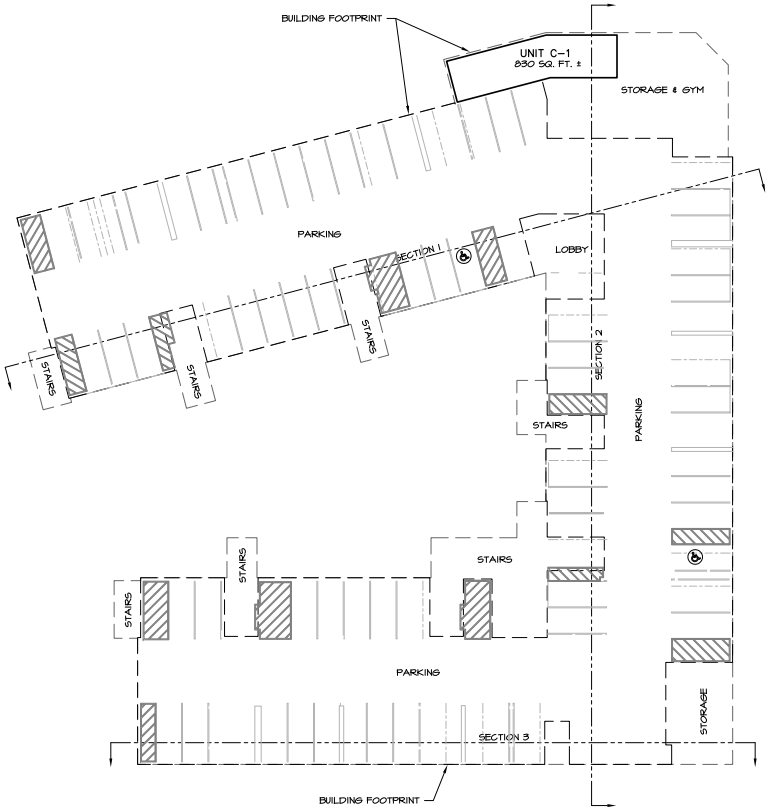
TM1

SHEET 16 OF 23

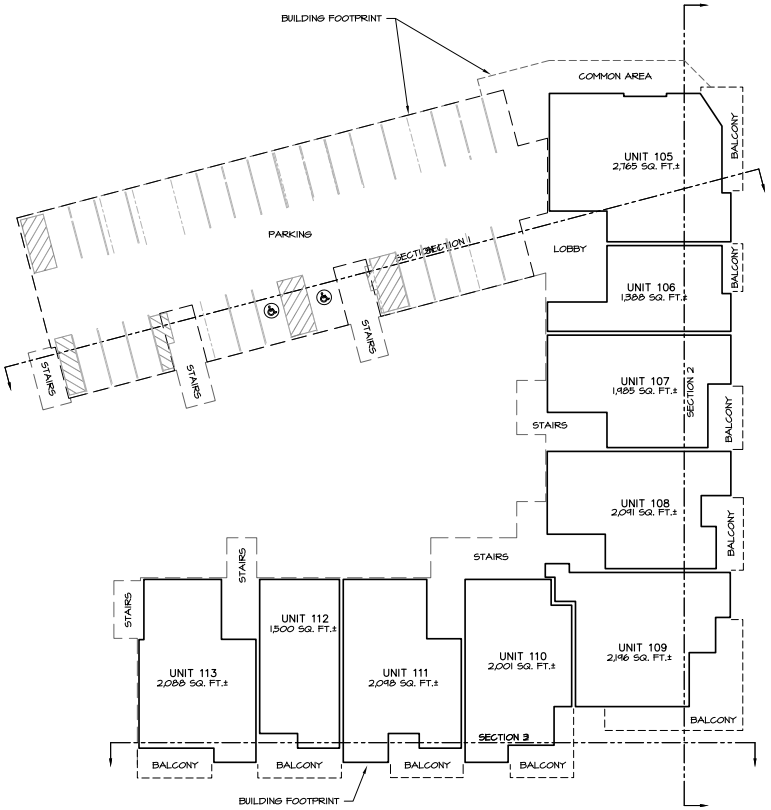
GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

NOTE: THERE ARE 45 PARKING SPACES TOTAL, 4 OF WHICH ARE HANDICAP ACCESSIBLE (2 ON THE BASEMENT LEVEL AND 2 ON LEVEL 1. THE VAN ACCESSIBLE SPACE IS ON LEVEL 1.



BASEMENT LEVEL



1ST FLOOR

NOTE: SEE SHEET TM5 FOR SECTIONS

ARNETT & ASSOCIATES, INC.
LAND SURVEYORS • PLANNERS
930 COUNTRY CLUB DR., NO. 13 INCLINE VILLAGE, NV 89451

947 TAHOE
A CONDOMINIUM

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

PROJECT NO: 00-09-05
DESIGNED BY: KA
DRAWN BY: JT
CHECKED BY: -- DATE --
DATE: 12-01-2021

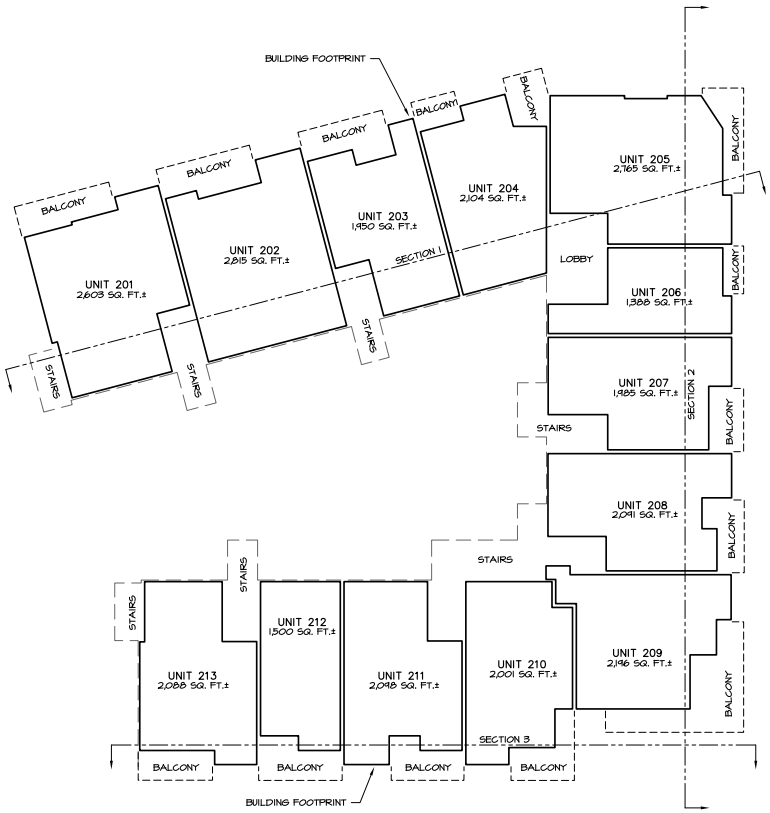
SHEET TITLE

TENTATIVE
SUBDIVISION MAP

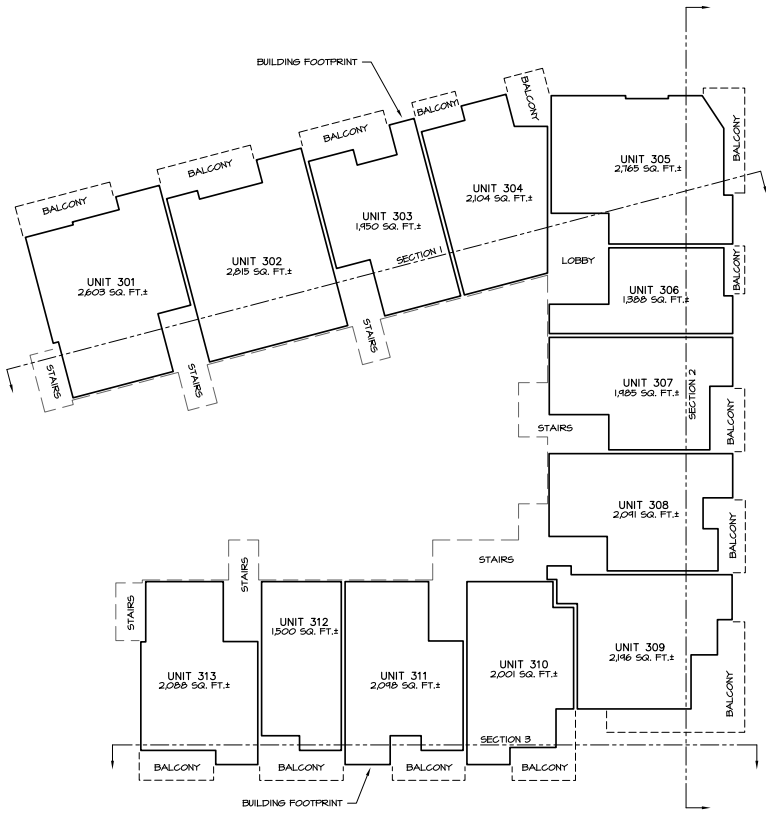
DRAWING
TM2

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.



2ND FLOOR



3RD FLOOR

NOTE: SEE SHEET TM5 FOR SECTIONS

ARNETT & ASSOCIATES, INC.
LAND SURVEYORS • PLANNERS
930 COUNTRY CLUB DR., NO. 13 INCLINE VILLAGE, NV 89451

947 TAHOE
A CONDOMINIUM

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

PROJECT NO: 00-09-05
DESIGNED BY: KA
DRAWN BY: JT
CHECKED BY: -- DATE --
DATE: 12-01-2021

SHEET TITLE

TENTATIVE
SUBDIVISION MAP

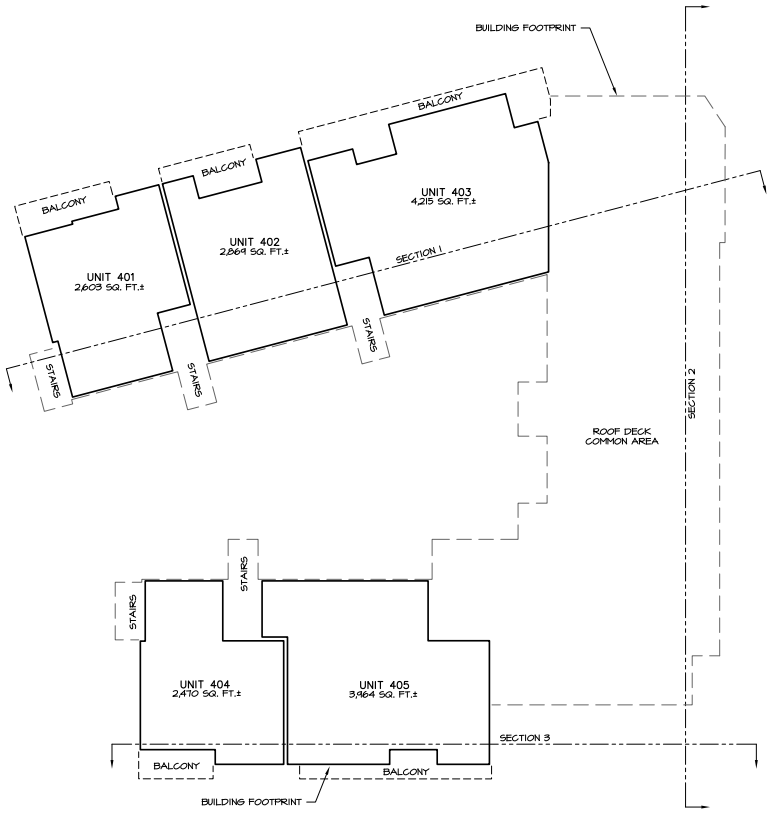
DRAWING

TM3

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



PENTHOUSE FLOOR

NOTE: SEE SHEET TM5 FOR SECTIONS

ARNETT & ASSOCIATES, INC.
LAND SURVEYORS + PLANNERS
930 COUNTRY CLUB DR., NO. 13 INCLINE VILLAGE, NV 89451

947 TAHOE
A CONDOMINIUM

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

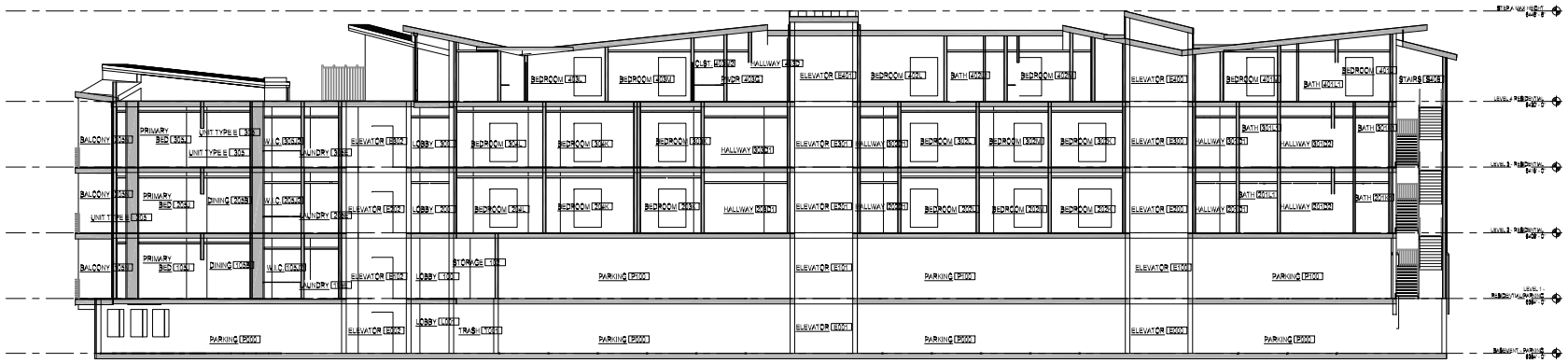
PROJECT NO: 00-09-05
DESIGNED BY: KA
DRAWN BY: JT
CHECKED BY: -- DATE --
DATE: 12-01-2021

SHEET TITLE

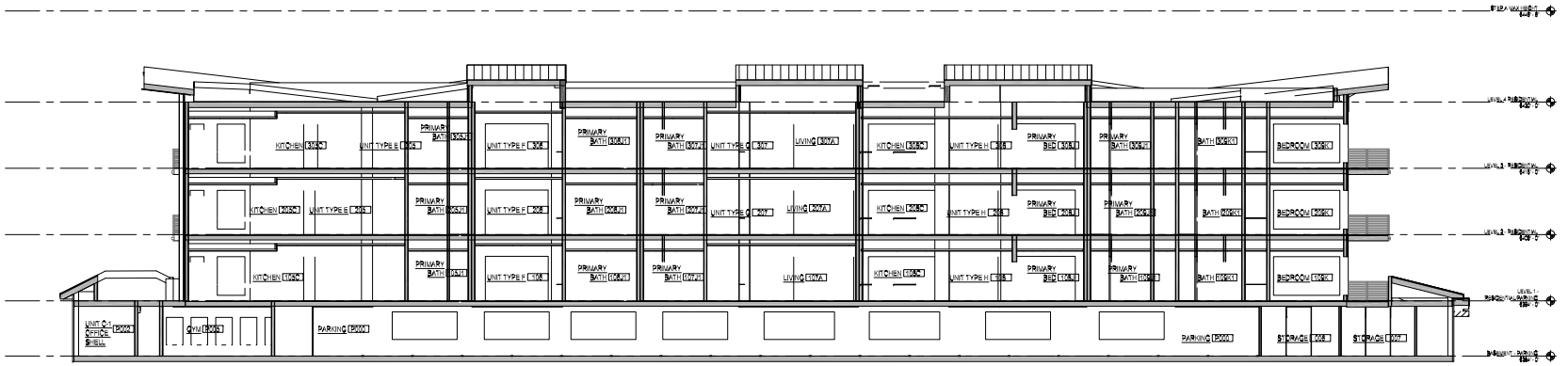
TENTATIVE
SUBDIVISION MAP

DRAWING

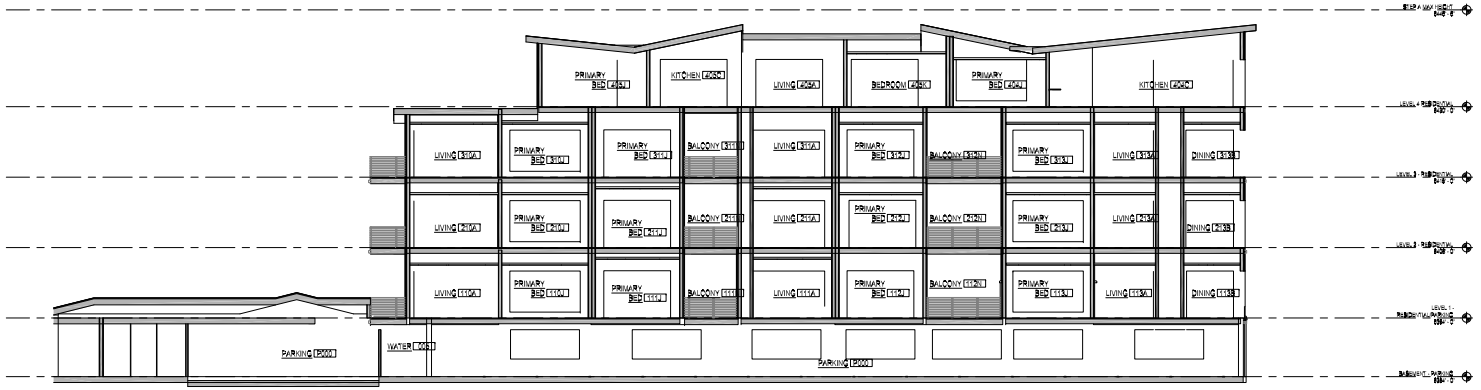
TM4



SECTION 1



SECTION 2



SECTION 3

AIRSPACE EXHIBIT
SCALE: 1"=10'

ARNETT & ASSOCIATES, INC.
LAND SURVEYORS + PLANNERS
930 COUNTRY CLUB DR., NO. 13 INCLINE VILLAGE, NV 89451

947 TAHOE
A CONDOMINIUM

OWNER

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STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

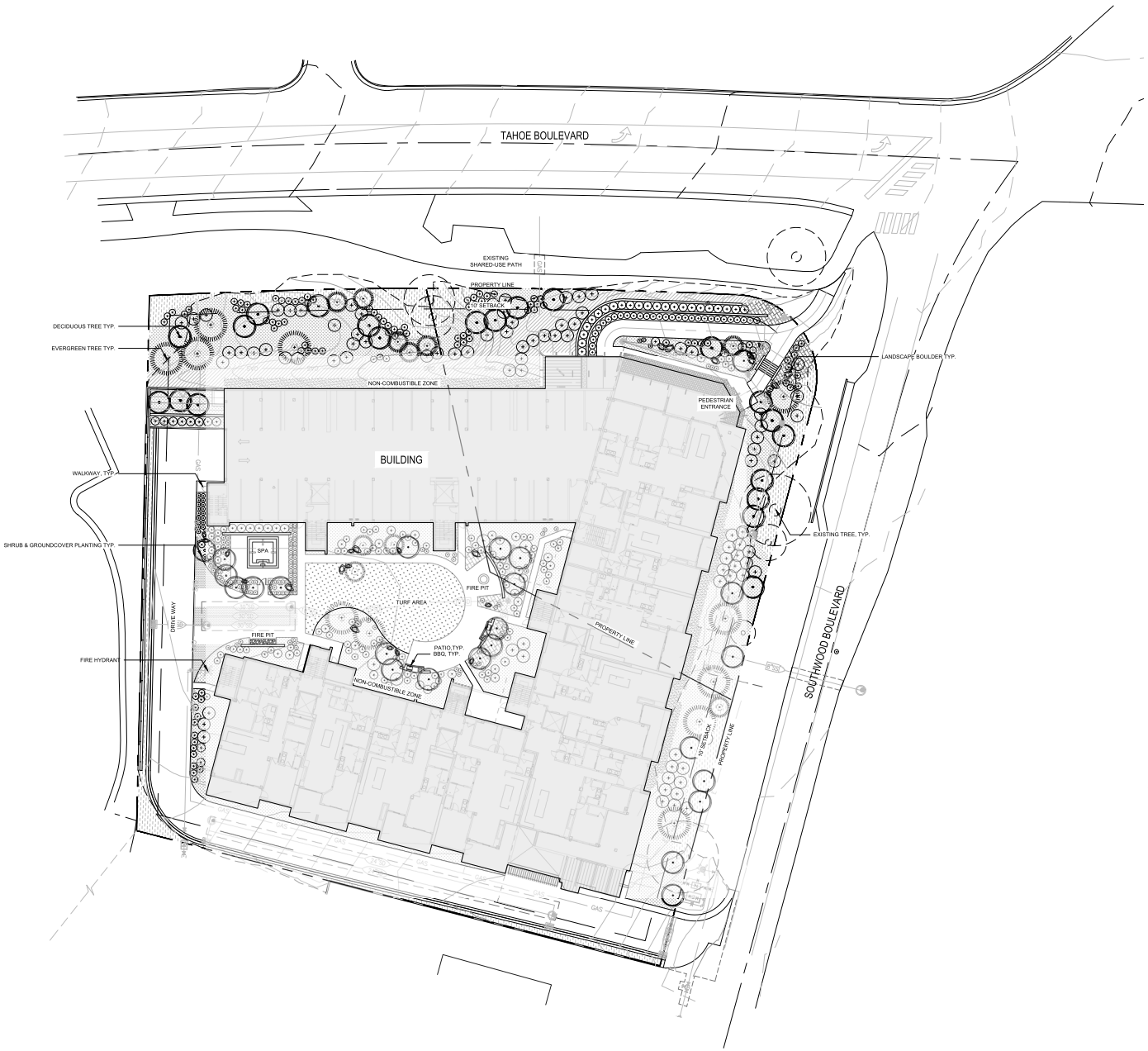
PROJECT NO: 00-09-05
DESIGNED BY: KA
DRAWN BY: JT
CHECKED BY: -- DATE --
DATE: 12-01-2021

SHEET TITLE

TENTATIVE
SUBDIVISION MAP

DRAWING

TM5



PLANT LIST

ABBR.	BOTANICAL NAME	COMMON NAME	TYPE	SPACING
EVERGREEN TREES				
PJ-15	*Pinus jeffreyi*	Jeffrey Pine	15' Tall	See Plan
PP-15	*Pinus ponderosa*	Ponderosa Pine	15' Tall	See Plan
CC-10	*Calocedrus decurrens*	Incense Cedar	10' Tall	See Plan
DECIDUOUS TREES				
AP-2	*Acer palmatum*	Japanese Maple	2" cal.	See Plan
AG-2	*Amelanchier canadensis 'Glen Form'*	Serviceberry	2" cal.	See Plan
PT-2	*Populus tremuloides*	Quaking Aspen	2" cal.	See Plan
PT-1.5	*Populus tremuloides*	Quaking Aspen	1.5" cal.	See Plan
SHRUBS				
CF	*Cornus stolonifera*	Red Osier Dogwood	5 gal.	48" O.C.
PO	*Physocarpus opulifolius 'Seward'*	Summer Wine Ninebark	5 gal.	36" O.C.
PM	*Pinus mugo mugo*	Mugo Pine	9 gal.	36" O.C.
PF	*Potentilla fruticosa 'Abbotswood'*	Abbotswood Potentilla	5 gal.	36" O.C.
SP	*Salix purpurea 'Nana'*	Dwarf Artic Willow	5 gal.	48" O.C.
SB	*Spiraea X bumalda 'Anthony Waterer'*	Anthony Waterer Spirea	5 gal.	48" O.C.
SC	*Symphoricarpos x chenaultii 'Hancock'*	Creeping Snowberry	1 gal.	24" O.C.
PERENNIALS / GROUNDCOVERS				
AM	*Achillea millefolium*	Moonshine Yarrow	1 gal.	24" O.C.
NF	*Nepeta X faassenii 'Walker's Low'*	Catmint 'Walker's Low'	1 gal.	24" O.C.
DC	*Deschampsia cespitosa*	Tufted Hair Grass	1 gal.	24" O.C.
HS	*Helictotrichon sempervirens*	Blue Oat Grass	1 gal.	24" O.C.
ORNAMENTAL GRASS				
	Bouteloua gracilis	Blue Grama Grass	1 gal.	24" O.C.
	Deschampsia cespitosa	Tufted Hair Grass	1 gal.	24" O.C.
	Elymus glaucus	Blue Wildrye	1 gal.	24" O.C.
	Elymus triticoides	Creeping Wildrye	1 gal.	24" O.C.
	Poa ampla	Big Bluegrass	1 gal.	24" O.C.

PLANTING LEGEND

- PROPOSED EVERGREEN TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED LARGE SHRUB
- PROPOSED MEDIUM SHRUB
- PROPOSED SMALL SHRUB
- PROPOSED PERENNIAL PLANTING
- PROPOSED GROUNDCOVER
- PROPOSED ORNAMENTAL GRASS PLANTING
- PROPOSED TURF
- PROPOSED ROCK MULCH
- PROPOSED SWALE PLANTING
- PROPOSED REINFORCED TURF

LANDSCAPE PLANTING NOTES

1. Refer to Civil Engineer's utility and grading and drainage plans as required. If actual site conditions vary from what is shown on the plans, contact the Landscape Architect for direction as to how to proceed.
2. Verify locations of pertinent site improvements installed under other sections. If any part of this plan cannot be followed due to site conditions, contact Landscape Architect for instructions prior to commencing work.
3. Exact locations of plant materials shall be approved by the Landscape Architect in the field prior to installation. Stake or otherwise layout all proposed planting for review. Landscape Architect reserves the right to adjust plants to exact location in field.
4. Verify plant counts and square footages. Quantities are provided as Owner information only. If quantities on plant list differ from graphic indications, then graphics shall prevail. If graphics are inconclusive contact Landscape Architect for clarification.
5. Perform excavation in vicinity of underground utilities and existing tree/plant driplines with care and if necessary, by hand. The Contractor bears full responsibility for this work and disruption or damage to utilities and existing trees/plants shall be repaired or replaced immediately at no expense to the Owner.
6. Trees/plants shall bear same relation to finished grade as it bore to existing in place of growth. However, at no point shall it be less than 1 inch above adjacent finish grade.
7. Trees shall be planted a minimum of 10 feet from face of building and a minimum of 4 feet from edge of pavement, except as approved by Landscape Architect.
8. Shrubs shall be planted a minimum of 3 feet from face of building and a minimum of 12 inches from edge of pavement, except as approved by Landscape Architect.
9. All other plants (perennials, grasses, groundcover, annuals) shall be planted a minimum of 12 inches from face of building and a minimum of 6 inches from edge of pavement, except as approved by Landscape Architect.
10. Provide matching forms and sizes for plant materials within each species and size designated on the drawings.
11. Prune newly planted trees only as directed by Landscape Architect.
12. Finish grades of planting areas and lawns shall be flush and meet smoothly and evenly with adjacent paving, providing positive drainage. Shovel V-cut edges shall be provided at planting area transitions to adjacent pavement as indicated to allow for mulch installation.
13. Provide specified edging as divider between planting beds and drip edge.

IRRIGATION NOTE

A combination of adapted native, drought resistant plant material and an efficient irrigation system is proposed for the project. An automatic controller with multiple functions will be used to operate different pressure zones and moderate the rates of application of water on a zone by zone basis. Rain sensors will monitor the operation of the system and shut it off during natural rain events. Drip irrigators around trees, shrubs, and perennials will be used to eliminate evaporation loses. Overhead sprinklers will only be used for turf areas. Plant species have been grouped with similar water requirements on common zones to match precipitation heads and emitters.

NORTH

0 10' 20' 40'

ORIGINAL SCALE: 1"=20'-00"

COLLABORATIVE DESIGN STUDIO architecture of experience and place
9444 DOUBLE R BLVD | SUITE B | RENO NV 89521
WWW.COLLABORATIVEDESIGNSTUDIO.COM
775.348.7777 | | 775.348.0904

DESIGNWORKSHOP
Landscape Architecture • Land Planning
Urban Design • Tourism Planning
PO Box 5666
128 Market Street
Suite 3E
Stateline, Nevada 89449
(775) 588-5929
WWW.DESIGNWORKSHOP.COM

REGISTERED LANDSCAPE ARCHITECT Steve Noll 510 STATE OF NEVADA
Expires: June 30, 2023

NOT FOR CONSTRUCTION

947 Tahoe

A.P.N. 132-213-09
INCLINE VILLAGE, NV 89451
WASHOE COUNTY

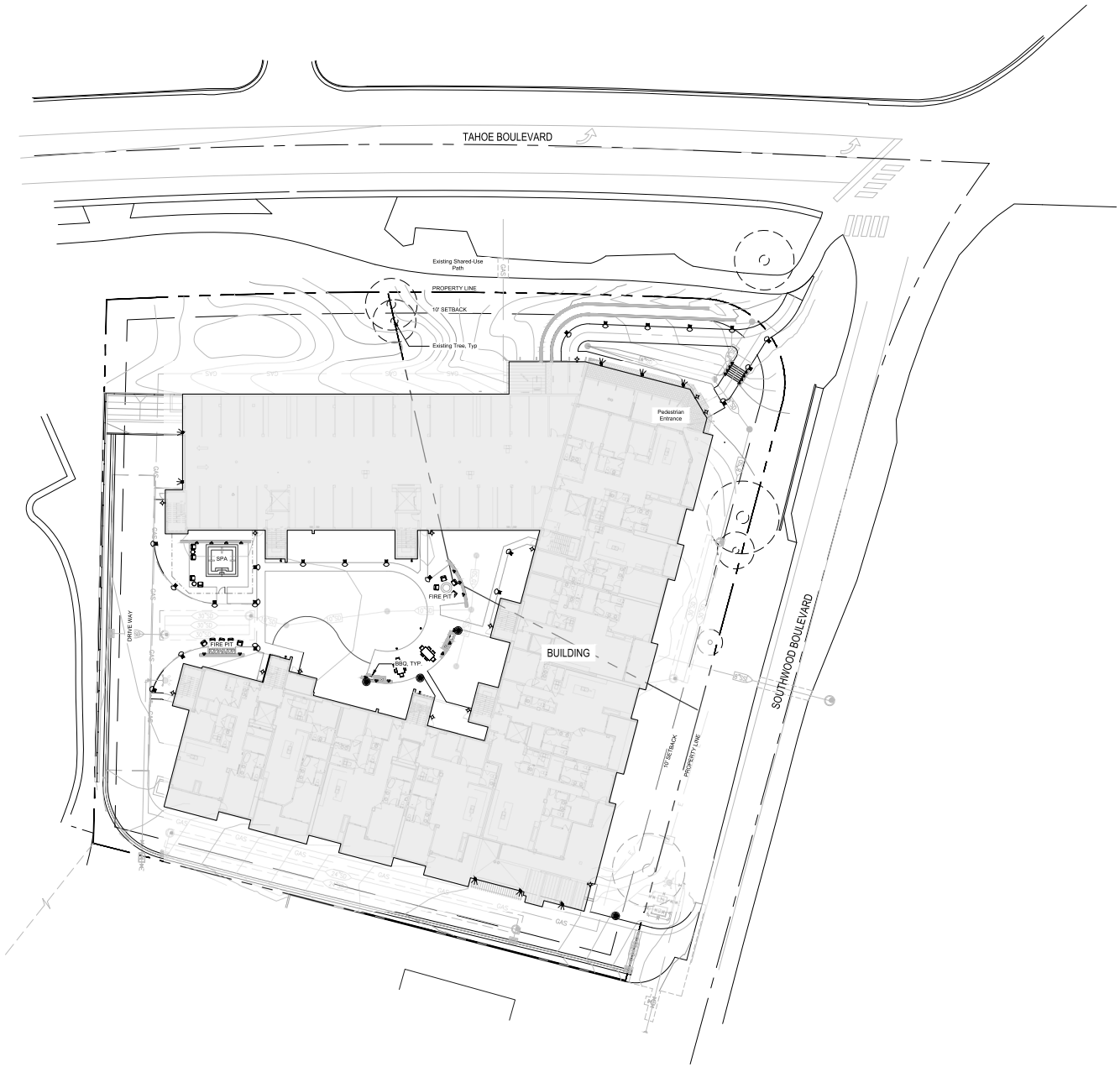
JOB NO.: 6682
DATE: 2-8-2023
REVISIONS:

TENTATIVE MAP SUBMITTAL

Planting Plan

AGENCY STAMP

L1.0



LIGHTING LEGEND:

- Bollard Light
- Recessed Wall Sconces
- Door Sconce
- Building/Eave-Mounted Down Light
- Pedestrian Pole Lights
- Wall Sconce

COLLABORATIVE DESIGN STUDIO architecture of experience and place

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REGISTERED LANDSCAPE ARCHITECT
Steve Noll
510
Expires: June 30, 2023
STATE OF NEVADA

NOT FOR CONSTRUCTION

947 Tahoe

A.P.N. 132-213-09
INCLINE VILLAGE, NV 89451
WASHOE COUNTY

JOB NO.: 6682
DATE: 2-8-2023
REVISIONS:

TENTATIVE MAP SUBMITTAL

Site Lighting Plan

AGENCY STAMP

L2.0

SNOW MANAGEMENT LEGEND:

- Snow Storage
- Snow Removal

NORTH

0 10' 20' 40'

ORIGINAL SCALE: 1"=20'-00"

COLLABORATIVE DESIGN STUDIO architecture of experience and place

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REGISTERED LANDSCAPE ARCHITECT
Steve Noll
510
Expires: June 30, 2023
STATE OF NEVADA

NOT FOR CONSTRUCTION

947 Tahoe

A.P.N. 132-213-09
INCLINE VILLAGE, NV 89451
WASHOE COUNTY

JOB NO.: 6682
DATE: 2-8-2023
REVISIONS:

TENTATIVE MAP SUBMITTAL

Snow Management Plan

AGENCY STAMP

L3.0

(#942)

COMMERCIAL SUB. NO. 1

PORTION OF S 1/2 OF SECTION 15, T16N - R18E

ALDER AVENUE
TAHOE BLVD.
NORTHWOOD BLVD.
VILLAGE ENTERPRISE
TANAGER STREET
EAST INCLINE BLVD.
INCLINE COURT
INCLINE WAY
SOUTHWOOD BLVD.

132-02
132-01
132-06
132-46
131-24
132-24
132-43
132-62
132-22
132-58
132-59
127-03
127-48
127-47
127-08
127-46
127-07

132-231-01 43841 sf
132-231-02 43582 sf
132-231-03 27300 sf
132-231-04 49279 sf
132-231-05 48870 sf
132-231-06 48197 sf
132-231-07 50019 sf
132-231-08 43774 sf
132-231-09 60506 sf
132-231-10 26057 sf
132-231-22 27256 sf
132-231-20 42035 sf
132-231-19 29900 sf
132-231-18 27642 sf
132-231-21 27109 sf
132-231-15 58255 sf
132-231-12 28171 sf
132-231-25 33790 sf
132-231-26 25706 sf
132-233-01 2.165 ac.
132-232-01 35979 sf
132-232-03 27467 sf
132-232-15 2.315 ac.
132-232-07 50135 sf
132-232-14 22661 sf
132-232-13 22656 sf
132-232-11 22835 sf
132-232-09 28203 sf
132-232-08 51384 sf

C
231
D
232
233

LOT 10A R.S.3983
LOT 11A R.S.3983

Assessor's Map Number

132-23

STATE OF NEVADA

WASHOE COUNTY

ASSESSOR'S OFFICE

Joshua G. Wilson, Assessor

1001 East Ninth Street
Building D
Reno, Nevada 89512
(775) 328-2231

Feet
0 25 50 100 150 200

1 inch = 200 feet

Sparks
Reno

created by: KSB 4/13/2009

last updated: CFB 07/30/2010

area previously shown on map(s)

NOTE: This map was prepared for the use of the Washoe County Assessor for assessment and illustrative purposes only. It does not represent a survey of the premises. No liability is assumed as to the sufficiency or accuracy of the data delineated hereon.

Reno Tahoe Geo Associates, Inc.

Consulting Civil Engineers
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July 1, 2021
Project No. 21073.001

Mr. Kevin Hanna
PAL CAP FIFF Tahoe I, LLC
940 Southwood Boulevard, Suite 101
Incline Village, Nevada 89451
Email: kevin@greenwood-homes.com

Subject: **Geotechnical Assessment**
Southwood Condominiums
941 and 947 Tahoe Boulevard
Incline Village, Washoe County, Nevada 89451
APN's: 132-231-09 and 132-231-10

Dear Mr. Hanna:

This report presents the results of Reno Tahoe Geo Associates' (RTGA's) geotechnical assessment for a proposed 5-story condominium building to be located on two adjoining parcels at 941 Tahoe Boulevard and 947 Tahoe Boulevard in Incline Village, Washoe County, Nevada (APN's: 132-231-09 and 132-231-10). This report provides the information required by Washoe County. The project location is shown on Plate 1.

A limited subsurface field investigation was included in this geotechnical assessment. Therefore, it is important that RTGA be involved during grading and construction to confirm that the site conditions are as anticipated and to make any necessary revisions to our recommendations.

PROJECT DESCRIPTION

The proposed project site is composed of two adjoining irregularly shaped parcels totaling 1.987 acres located at 941 Tahoe Boulevard and 947 Tahoe Boulevard (corner parcel), Incline Village, Washoe County, Nevada. The parcels are bounded to the north by Tahoe Boulevard, to the east by Southwood Boulevard, and to the south and west by developed privately owned parcels. Access is by existing paved and gravel private driveways from Tahoe Boulevard and Southwood Boulevard. A site plan

including the existing property lines and the proposed condominium building footprint is presented on Plate 1.

The two parcels are currently undeveloped, unoccupied, and without above ground structures. The corner lot, 947 Tahoe Boulevard, was formerly occupied by a Chevron gas station. 941 Tahoe Boulevard is located on the south and west sides of 947 Tahoe Boulevard and formerly had a building used as a restaurant located in the north-central portion of the parcel near Tahoe Boulevard. The southern portion of this parcel does not appear to have undergone any historic development. An approximately 4-foot high retaining wall located on the west edge of the corner lot along its north-south property line. The formerly developed portions of each parcel are approximately level and the levelled portion of 947 Tahoe Boulevard is approximately 8 feet lower than the levelled portion of the western parcel. From Tahoe Boulevard, the combined parcels slope from approximately 6,406 feet at the northwest corner to 6,379 feet at the southeast corner where they meet Southwood Boulevard, resulting in an overall site slope of approximately 7 percent to the southeast.

We understand that a new, 5-story condominium complex with covered parking will be constructed with anticipated cuts of up to 20 feet and fills on the order of 8 feet or less. E-mail correspondence indicates the complex will be supported on concrete slab with a concrete and steel structure. Structural loads were not available at the time of this report and were assumed for the purposes of this proposal. Estimated vertical structural loads are not expected to exceed 50 kips at isolated columns and 2 kips to 4 kips per linear foot along continuous wall foundations for long-term loading conditions. Once plans are made available, we may need to modify our recommendations if the actual construction scope differs.

REFERENCES

The following information was provided to RTGA in the course of this investigation and serves as the basis of our understanding of the project type and scope.

- Topographic Survey, Arnett & Associates, Inc., 941 & 7 947 Tahoe Boulevard, Washoe County, Nevada, October 30, 2020.

- ALTA/NSPS Land Title Survey, 941 & 7 947 Tahoe Boulevard, Washoe County, Nevada, October 30, 2020.

The following published and unpublished references were also reviewed during preparation of this report.

- ASCE, 2019, ASCE 7 Hazard Tool, accessed June 2021;
- Natural Resources Conservation Service (NRCS) *Web Soil Survey in Google Earth*, accessed June, 2021;
- *Washoe County Real Property Assessment Data,* Washoe County website accessed June 2021;
- Saucedo, George J. 2005, *Geologic Map of the Lake Tahoe Basin*, *California and Nevada*, California Geological Survey;
- United State Geologic Survey (USGS), Quaternary Fault and Fold Database of the United States, (http://earthquake.usgs.gov/hazards/qfaults/), accessed August 2020.

We also reviewed nearby projects and our previous experience in the project area in developing these recommendations.

FIELD EXPLORATION

Our selection of field exploration locations was based on the anticipated project layout and site access. The subsurface exploration consisted of three test pits and a shear-wave velocity survey, which were located in the field by visual sighting and/or measuring from existing features at the site. The exploration locations shown on Plate 1 should be considered accurate only to the degree implied by the methods used.

Refraction Microtremor Survey (ReMi)

A Refraction Microtremor (ReMi) geophysical array was utilized to obtain shear-wave velocity measurements to determine the Seismic Design Category and estimate the depth to competent bedrock. ReMi provides a means to obtain a basic subsurface profile in an essentially continuous profile without physical investigations across the explored location. The results of the ReMi survey are presented both as a one-dimensional vertical profile and a two-dimensional transect on Plate 2.

Test Pit Excavation

Three test pits were excavated using a Link-Belt 145 X 2 excavator. Our engineer visually classified soils encountered in the test pit according to the Unified Soil Classification System (USCS) and obtained bulk samples for further identification and laboratory testing. Soil conditions encountered are presented on the test pit logs on Plates 3 through 5. A description of the USCS used to identify the site soils and a test pit log legend are presented on Plate 6.

After the test pits were completed, they were backfilled with excavated soil using the equipment on site. Backfill was loosely placed and not compacted to the requirements typically specified for engineered fill. Structures, slabs supported on grade, or pavements located over these areas may experience excessive settlement. Removal and re-compaction of test pit backfill may be required prior to construction of improvements over this area.

LABORATORY TESTING

Laboratory tests were performed on selected samples to aid in soil classification and to evaluate physical properties of the soils, which may affect the geotechnical aspects of project design and construction. Gradation analysis and plasticity index (Atterberg Limits) was performed for a sample of site soils. Laboratory test results can be found on the test pit logs (Plates 3 through 5) and on Plates 7 and 8 at the end of this report. In addition, one soil sample of sandy lean clay collected from 12 feet depth in TP-01 was submitted for soil corrosivity analysis. Results of laboratory testing for this sample will be reported under separate cover when they are received.

SOIL AND GEOLOGIC CONDITIONS

According to Saucedo et al. (2005), the site is underlain by unnamed gravels, sand, and alluvium of Pliocene and/or Pleistocene age. Based on published information by NRCS and site observation, the native soils have been categorized as Inville gravelly coarse sandy loam, 2 to 9 percent slopes, stony, and within the hydrologic soil group A. The soil is well drained, with a saturated permeability of 2 to 6 inches per hour. According to Saucedo et al. (2005), the site is underlain by undivided glacial outwash deposits of Holocene or Pleistocene age.

Based on test pit excavations, laboratory analysis of soil samples, and the seismic survey conducted at the site, the subsurface conditions consist of greater than 15 feet thickness of silty gravel with sand,

cobbles, and boulders, over highly-weathered bedrock. Sandy lean clay was logged between 11 and 13 feet depth in test pit TP-1. Clayey sand with gravel was encountered below 13 feet in test pit TP- 1.

The upper portion of bedrock, if encountered, may consist of intermixed weathered and permeable zones with harder boulder or zones where jointing is widely spaced. The bedrock typically transmits infiltrated water vertically to joint systems to sills or geologic contacts at depth, and rarely have springs or surface runoff. Boulders and bedrock may exhibit variations in density and hardness within the planned excavation.

The weighted average soil shear-wave velocity measured in the upper 100 feet of the soil horizon is 1,385 feet per second (fps) based on the ReMi measurement. Based on the shear-wave velocity profile, the soil at the ground surface is dense (material shear-wave velocities of about 800 fps to 1,000 fps). The ReMi data suggests that soft to hard rock (material greater than 1,200 fps to 2,800 fps shear-wave velocity) is present at approximately 16 to 26 feet in depth. Very hard excavation conditions may be present at shallow depths. The contractor should anticipate shallow large boulders and possibly bedrock in excavations.

No groundwater was observed in the test pits.

Seismicity and Faulting

Lake Tahoe lies within an area with moderate to high potential for strong ground shaking from large earthquakes (moment magnitude 7 or larger) in northern Nevada and California. Ground shaking can result in secondary seismic hazards such as liquefaction, seismic settlement, differential compaction, seismically induced slope instability, and rock falls. None of these hazards are present in this site due to dense soils, moderate slopes, and absence of tall rock outcrops or surface boulders. Due to the high potential for strong ground shaking from earthquakes, all structures should be designed for seismic loads in accordance with the most recently adopted International Building Code/International Residential Code.

Saucedo et al. (2005) and the USGS Fault and Fold Database indicate the nearest fault is the Incline Village Fault approximately 7,400 feet west, (Saucedo, 2005). This fault zone is assigned as a Class A Fault of undifferentiated Quaternary Age. Based on review of the above-referenced published sources, no evidence was found that would indicate the presence of active faults trending through the subject property. No portion of any active Holocene age faulting is known to cross the site at this time, nor has any direct evidence of on-site faulting been observed in the field during the subsurface exploration of this project. No additional fault studies or fault setback requirements are needed for the subject parcel.

RECOMMENDATIONS AND DISCUSSION

From a geotechnical engineering standpoint, the site may be developed as a condominium structure as planned. Based upon our review of the above-referenced material, we have developed the following conclusions. These conclusions may change if additional information becomes available or the design is changed. *Please note, it is recommended that the soil and rock conditions presented in this report be verified during construction by the project geotechnical engineer*.

- The presence of shallow boulders is expected to be a significant constraint which will result in additional costs and difficulties during construction. No other soil or groundwater constraints were observed which will preclude the development as planned.
- Soils are a loose to medium dense silty sand with varying gravel, cobble, and boulder content. Boulders greater than 6 feet diameter were encountered in test pit TP-1 and smaller boulders were found to be common in the subsurface across the site. The contractor should anticipate boulders during excavation of the planned subgrade parking area, footings, and trenches.
- In most cases, native soils, if screened to <6 inches, are suitable for reuse as structural fill under structural areas or floor slabs. This excludes clayey soils such as those found below 11 feet depth in TP-1. Native soil is suitable for subgrade below footings or slabs if in a relatively undisturbed state. The Contractor may choose to use onsite material in structural areas but should be made aware that these soils may prove difficult to moisture condition and compact. It will be far easier to backfill narrow excavations, such as between building walls and excavations, with drain rock, aggregate base, or other readily specified compactable materials.

- Imported structural fill, if required, should consist of granular material nearly free of organic debris, with a liquid limit of less than 35, a plasticity index less than 12, 100 percent passing the 4-inch sieve, and less than 30 percent passing the No. 200 sieve. All imported fill materials should be approved by the project Soils Engineer prior to being transported to the site.

- Fill should be uniformly moisture conditioned to within 2 percent of optimum moisture content and placed in layers of 8 inches or less in loose thickness. Each lift should then be compacted with appropriate compaction equipment to achieve at least 90 percent relative compaction*, unless specified otherwise. No fill material should be placed, spread, or rolled while it is frozen, thawing, or during unfavorable weather conditions.

- Fills with more than 30 percent of particles greater than ¾-inch diameter and composed of durable stone or rock fragments, including drain rock and, likely, native materials, are not applicable to conventional compaction testing and is considered "rock fill". These materials should be uniformly moisture conditioned to above optimum moisture content and placed in thin layers not exceeding one foot in loose thickness. They should be compacted with a minimum of five passes with a large sheepsfoot compactor, such as Caterpillar 825, a large excavator with a compaction wheel, or a minimum of five passes with hand held compaction equipment in trenches or other small excavations. Compaction shall continue until no further densification or change in volume is noted. Any fill material within this category should be placed only under continuous observation and approval of the soil engineer. It is also noted that other types and sizes of compaction equipment may require thinner lifts of material.

- The 2018 International Building Code or International Residential Code should be implemented for the project seismic design. A Site Class C, per the IBC, is applicable for site soils due to the proximity of bedrock to the surface. For design purposes, the seismic criteria in the following table should be implemented.

* Wherever referenced in this report, relative compaction should be determined by comparing to the maximum density and optimum moisture content determination in accordance with ASTM D1557 Test Method for compaction curves.

SEISMIC DESIGN CRITERIA USING ASCE 7-16 *SOUTHWOOD CONDOMINIUM PROJECT, INCLINE VILLAGE, NEVADA*	
Approximate Latitude of Site	39.24874
Approximate Longitude of Site	-119.947296
Spectral Response Acceleration at Short Period (0.2 second), S_s	1.805 g
Spectral Response Acceleration at 1-Second Period, S_1	0.618 g
Site Class Selected for this Site	C
Site Coefficient, F_a	1.2
Site Coefficient, F_v	1.4
Site Spectral Response Acceleration at Short Period, S_{MS}	2.166 g
Site Spectral Response Acceleration at Long Period, S_{M1}	0.866 g
Design Spectral Acceleration Parameters, S_{DS}	1.44
Design Response Spectrum, S_{D1}	0.58
Peak Ground Acceleration (PGA)	0.77 g

- We recommend that all foundations be bottomed at a minimum depth of 24 inches below the existing ground surface. This depth will provide adequate foundation support and protect against shallow ground loosening due to frost heave.
- Foundations bottomed at least 2 feet below the final ground surface may be designed for an allowable bearing pressure of 3,000 psf, assuming a minimum footing width of 12 inches. Bearing capacity can be increased by 500 psf for each foot of increase in thickness up to 4,500 psf. Footings at greater than 10 feet depth can be designed for an allowable bearing pressure of 6,000 psf where they are on bedrock.
- The allowable bearing pressure may be increased by one-third for total loading conditions, including wind and seismic forces. For balanced backfill, the allowable bearing pressure is a net value; therefore, the weight of the foundation which extends below grade and the overlying backfill may be neglected when computing dead loads.
- Total settlement of an individual foundation will vary depending on the plan dimensions of the foundation and the actual load supported. Based upon anticipated foundation dimensions and loads, we estimate that total post-construction settlement of footings designed and

constructed in accordance with the recommendations of this report will be ½-inch. Differential settlement between similarly loaded, adjacent footings is expected to be ¼-inch, provided footings are founded on similar materials (e.g., all on native soil). Settlement of all foundations is expected to occur rapidly, generally during the construction time frame for the building. Improvements supported on non-structural fill may experience larger settlements.

- **All footing excavations should be observed by the project Soils Engineer** prior to placing reinforcing steel for concrete to verify the underlying soil conditions and recommendations contained herein are implemented during construction.
- Excavations from the surface to 15 or more feet below surface are likely to encounter boulders with intervening soil filled voids. Soil and altered rock temporary excavations may potentially be in the range of 1H:1V to 1.5H:1V. Slopes to 1H:3V feet may be generally stable below this depth, provided chain link netting is used to prevent loosening of boulders. However, RTGA should closely observe excavations below the bedrock surface to verify that loose or over-steepened zones are not present which could allow rock wedges or boulders to slide into the excavation. Steeper excavations can be implemented if required, but will generally require either soil-nail and shotcrete facing in soil and weathered bedrock, or spot nailing of bedrock blocks and wedges in intact bedrock (without shotcrete)
- If required, rock anchors or soil nails may be needed to stabilize unstable areas within the excavation wall. Rock anchors or soil nails commonly used in the area are hollow bars with 1½-inch outer diameter fitted with a drill bit of 3 to 3½-inches diameter. Soil nails are typically drilled 5 feet or more into the bedrock surface. Neat cement grout is pumped through the hollow center of the bar and create a 3½-inch-diameter annulus of grout around the bar back to the surface. For design of soil nails the ultimate grout to soil/bedrock interface is expected to be approximately 30 psi in soil to 60 psi for depths greater than 5 feet into the bedrock surface (FHA, 2005).
- Soil nail walls in theory could be used for permanent support of the uphill side of the excavation, however practically the excavation will not be neat and the excavation line will likely vary widely outside of the building line due to uneven rock joints and fractures. Careful consideration would be required for drainage and removal of groundwater seepage behind the shotcrete face so that it does not affect interior building components.

- If required, subterranean structures and retaining walls, including foundations, should be designed to resist the lateral earth pressure exerted by the retained, compacted backfill plus any additional lateral force that will be applied to the wall due to surface loads placed at or near the wall. The table below presents a list of soil design parameters for these structures.

TABLE 2 - LATERAL EARTH PRESSURES

Earth Pressure	Equivalent Fluid Density (pcf)
Active Pressure	
Retained Slope = Level to 4H:1V	30
Retained Slope = 4H:1V to 2H:1V	40
At-Rest Pressure	
Rigidly Restrained	60
Seismic Active	
Retained Slope = Level to 4H:1V	60
Retained Slope = 4H:1V to 2H:1V	80
Allowable Passive Pressure	
Retained Slope = Level	350
Allowable Coefficient of Friction	0.45

- Surcharge loads behind walls are not factored into the recommended equivalent fluid pressures. Any anticipated surcharge load should be factored into the design in addition to the above-mentioned pressures.
- The active pressure can be used for flexible walls with a potential to dislocate. At-rest pressure should be used for building walls or restrained walls. The seismic active pressure is applicable for the earthquake condition for both at-rest and active walls.
- The values do not include hydrostatic pressures that might be caused by collected runoff water trapped behind the structure. Accordingly, wall backfill should be free draining and provisions should be made to collect and dispose of excess water that may accumulate behind earth retaining structures.
- Adequate drainage of backfill in the form of subdrains should be provided at the base of exterior walls (preferably below the joint between wall and footing) to collect and dispose of

excess water which can accumulate behind the retaining structures. The subdrain should be placed in the drain rock and be enveloped in filter fabric as shown on Plate 9. Drain rock should be densified to a non-yielding condition by placing in lifts and compacting in a manner which does not damage the waterproofing material or structurally damage the wall. Dripline trenches or surface drains should not be connected to the exterior foundation drain.

- Heavy compaction equipment or other loads which may result in lateral pressures higher than those recommended above should not be allowed within proximity to the wall, unless planned for in the structural design.
- Where retaining walls will enclose useable interior space or floors below grade, the wall should be waterproofed. Waterproofing material should consist of rubberized asphalt, polymer-modified asphalt, butyl rubber, or other approved materials capable of bridging nonstructural cracks. Joints in the membrane should be lapped and sealed in accordance with the manufacturer's recommendations. Extra attention should be paid to concrete cold joints between the wall and footing. A manufactured water-stop or key should be placed at all cold joints.
- The drain system should discharge into a properly designed infiltration trench, storm drain system, or other approved exterior location. Filter fabric (Mirafi 140N or approved alternate) should separate the drain rock from overlying fill materials to prevent sand or fines from migrating into the drain rock.
- Due to the potential for water seepage and moisture migration through concrete slab-on-grade floor and to reduce the potential for build-up of hydrostatic pressure, we recommend a drain system be constructed under slab-on-grade floors. In general, the under-slab drain system should consist of 3-inch-diameter (minimum) perforated pipe placed in at least 8-inches of drain rock and spaced at a maximum 24 feet apart. The subgrade should slope toward the perforated drainpipes and the pipes should have at least a one-percent slope.
- Crawl spaces must be built with permanent drainage, including sloped interior surfaces and/or a perimeter drain trench filled with drain rock. Positive drainage should be provided from all portions of the crawlspace to the lowest part of the crawlspace, and then under or through the perimeter footing to discharge down gradient from the structure and exterior flatwork. The

discharge should be into a properly designed infiltration trench, the storm drain system, or other approved exterior location.

- Radon is a naturally occurring, dense, odorless gas that is generated from radioactive degradation of uranium in granitic rocks decaying into isotopes which can contribute to lung cancer. Active or passive radon venting of below-grade spaces should be considered, including crawlspaces, to reduce potential for radon to diffuse into living spaces. The subfloor perforated pipe vent system under the slab-on-grade floor can be considered for passive radon mitigation.
- Finished grades should be sloped to prevent ponding of water and to direct surface water away from foundations. Impervious surfaces adjacent to the building foundation should slope away from the building at a minimum 5 percent gradient for at least 5 feet. The dripline trench should not be in direct communication with the foundation drain layer.

LIMITATIONS

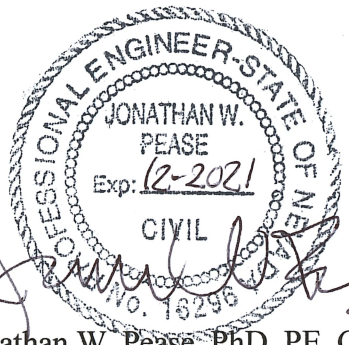
This report has been prepared for design purposes for specific application to the currently proposed project in accordance with the generally accepted standards of practice at the time the report was written. If the scope of the proposed construction changes from those described, our recommendations should be reviewed by us and may require modification. No warranty, express or implied, is made.

All parties to the project including the designer, contractor, subcontractors, etc., should be made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk.

CLOSURE

We trust the report provides you with the information you require. If there are any questions, please contact our office.

Sincerely,
Reno Tahoe Geo Associates, Inc.



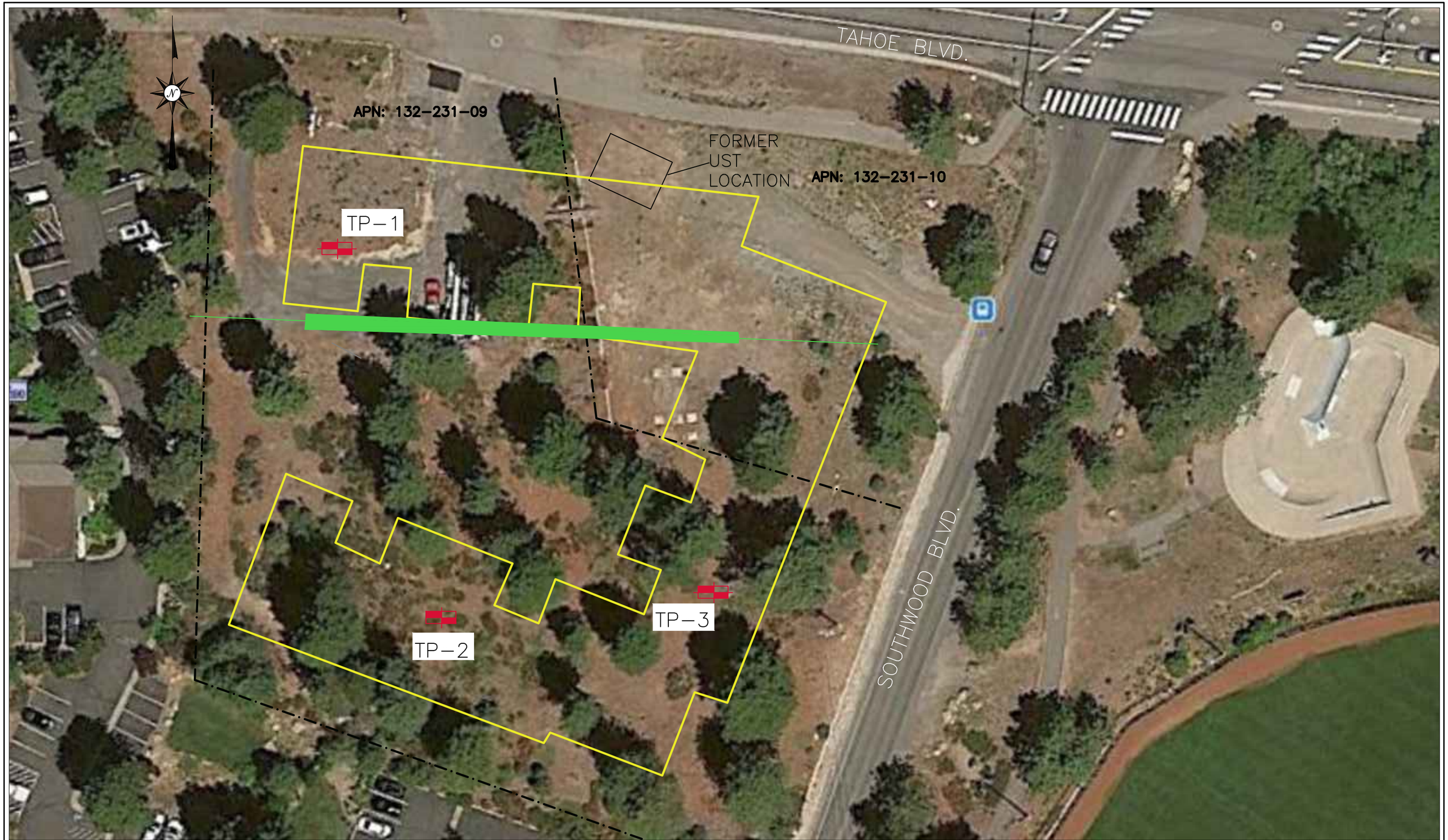
6-30-21

Shane Mulvaney
Senior Geologist

Jonathan W. Pease, PhD, PE, GE
Principal Engineer NV 16296

Plates:
- Plate 1 - Site Map
- Plate 2 - ReMi 1D & 2D Results
- Plate 3 - Log of Test Pit TP-1
- Plate 4 - Log of Test Pit TP-2
- Plate 5 - Log of Test Pit TP-3
- Plate 6 - Soil Classification Chart
- Plate 7 - Grain Size Analysis
- Plate 8 - Atterberg Limits
- Plate 9 - Typical Back of Wall Drain

PLATES



Test Pit Location

Approximate Parcel Boundary

Approximate Building Outline

ReMi Profile – Thick Portion of Line Shows Extent of 2-D Profile

0 50 100

SCALE: 1"= 50'

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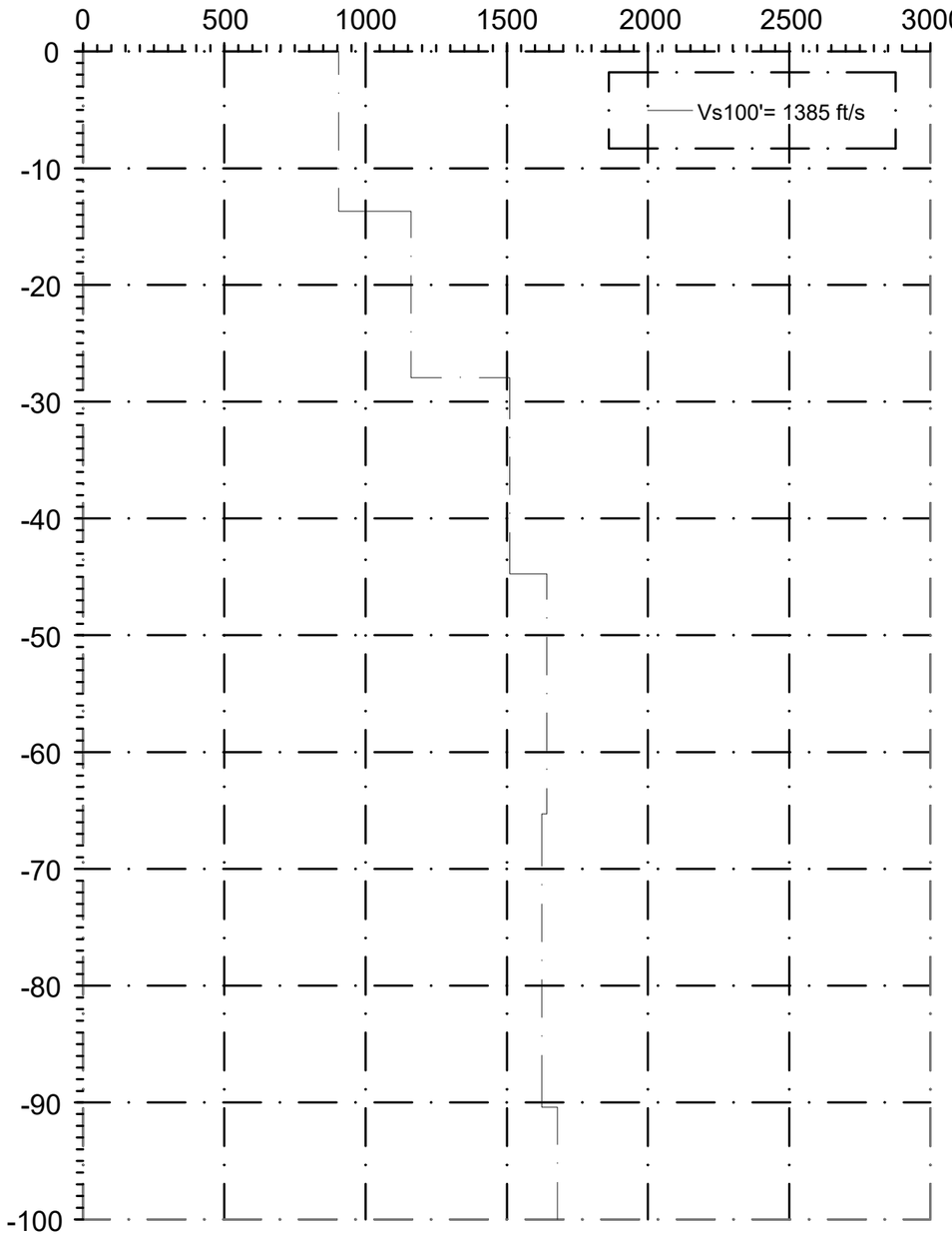
JOB # 21073.001 APPR: _____ DATE: 05/13/2021

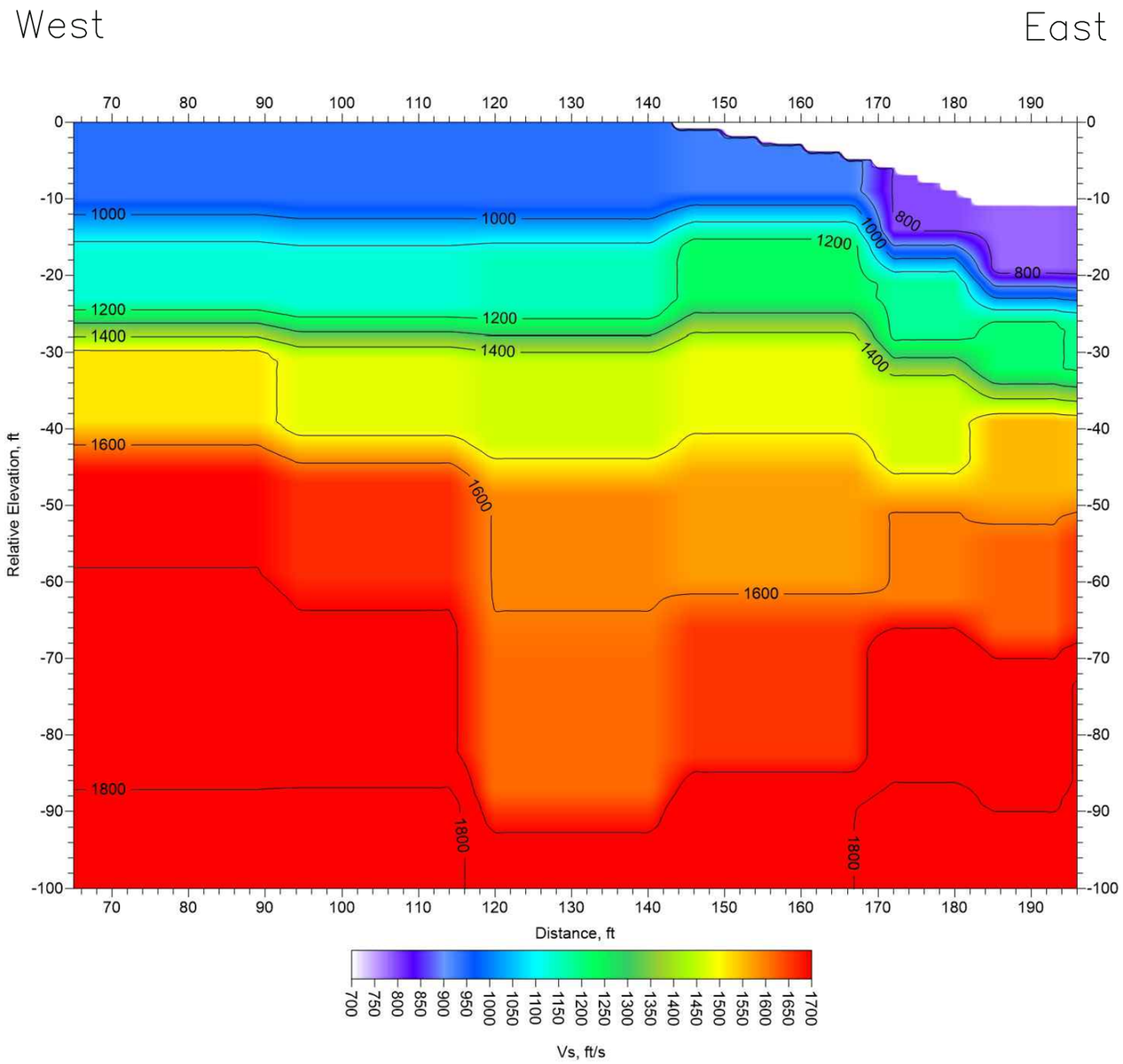
SITE MAP

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY CALIFORNIA

PLATE 1





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REMI LINE RESULTS

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUM PROJECT
INCLINE VILLAGE

WASHOECOUNTY NEVADA

PLATE
2

LOG OF TEST PIT TP-1

LOCATION NORTHWEST QUADRANT OF SITE

EQUIPMENT LINK-BELT 145 X 4

ELEVATION _____ DATE 6/10/21

LABORATORY TESTS	FIELD BLOWS /6in	BLOWS/FT	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DEPTH (ft)	SAMPLE	
					0		**LIGHT GRAY SILTY SAND (SM)** Pine duff overlying silty sand (decomposed granite) fill. (10YR 7/1) (est.15% G/ 55% S/ 30% F)
					2		**DARK YELLOWISH BROWN SILTY SAND WITH BOULDERS AND COBBLES (SM)** Dry to slightly moist, loose, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 20% angular to subrounded cobbles and 20% subangular to subrounded boulders to 3 feet size. Abundant roots. (10YR 3/4) (est.20% G/ 60% S/ 20% F)
					4		**BROWNISH YELLOW SILTY SAND WITH BOULDERS AND COBBLES (SM)** Dry to slightly moist, loose to medium dense, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 20% angular to subrounded cobbles and 20% subangular to subrounded boulders to 6+ feet size. Abundant roots. (10YR 6/8) (est.30% G/ 50% S/ 20% F)
					6		
					8		**LIGHT GRAY** Single boulder of indeterminate size. Hard, lenticular granite mass. Difficult to excavate. (10YR 7/1)
					10		**BROWNISH YELLOW SILTY SAND WITH BOULDERS AND COBBLES (SM)** Slightly moist, loose, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 20% angular to subrounded cobbles and 20% subangular to subrounded boulders to 3 feet size. (10YR 6/8) (est.30% G/ 50% S/ 20% F)
SA, Percent Passing #200 =51% Liquid Limit = 35 Plasticity Index = 14					12		**YELLOWISH BROWN LEAN CLAY (CL)** Slightly moist to moist, fine sand in soft to firm, low plasticity clay. Grey (5Y 5/5) and dark yellowish brown (10YR 4/6) mottling. (10YR 5/8)
					14		**STRONG BROWN SILTY, CLAYEY SAND (SC-SM)** Moist, loose, thin low to medium plasticity clay and non-plastic silt layers in fine to coarse sand. Fine to medium subangular to subrounded gravel. (7.5YR 5/6) (est.20% G/ 50% S/ 30% F)
					16		TERMINATED @ 15' No Free Water Observed

)

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LOG OF TEST PIT TP-1

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 3

1 LOG LETTER SIZE SOUTHWOOD CONDOS.GPJ MED DATA TEMPLATE 2015A.GDT 7/1/21

LOG OF TEST PIT TP-2

LOCATION SOUTHWEST QUADRANT OF SITE

EQUIPMENT LINK-BELT 145 X 4

ELEVATION _____ DATE 6/10/21

LABORATORY TESTS	FIELD BLOWS /6in	BLOWS/FT	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DEPTH (ft)	SAMPLE	
					0		**DARK REDDISH BROWN SILTY SAND (SM)** Dry, loose, angular to subrounded gravel, non-plastic silt, in fine to coarse sand. Pine duff overlying topsoil. (2.5YR 3/4) (est.15% G/ 60% S/ 25% F)
					2		**DARK YELLOWISH BROWN SILTY SAND WITH COBBLES AND BOULDERS (SM)** Dry to slightly moist, loose matrix, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 25% angular to subrounded cobbles and 20% subangular to subrounded boulders to 3 feet size. Abundant roots. (10YR 4/6) (est.20% G/ 60% S/ 20% F)
					4		
					6		
					8		**YELLOWISH BROWN SILTY SAND WITH COBBLES AND BOULDERS (SM)** Dry to slightly moist, loose matrix, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 30% angular to subrounded cobbles and 5% subangular to angular boulders to 3 feet size. (10YR 5/6) (est.25% G/ 55% S/ 20% F)
					10		
					12		TERMINATED @ 13' No Free Water Observed
					14		
					16		

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LOG OF TEST PIT TP-2

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE
WASHOE COUNTY NEVADA

PLATE 4

1 LOG LETTER SIZE SOUTHWOOD CONDOS.GPJ MED DATA TEMPLATE 2015A.GDT 7/1/21

LOG OF TEST PIT TP-3

LOCATION SOUTHEAST QUADRANT OF SITE

EQUIPMENT LINK-BELT 145 X 4

ELEVATION _____ DATE 6/10/21

LABORATORY TESTS	FIELD BLOWS /6in	BLOWS/FT	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DEPTH (ft)	SAMPLE	
					0		**DARK REDDISH BROWN SILTY SAND (SM)** Dry, loose, angular to subrounded gravel, non-plastic silt, in fine to coarse sand. Pine duff overlying topsoil. Scattered surficial boulders to 5 feet size. (2.5YR 3/4) (est.15% G/ 55% S/ 30% F)
					2		**DARK YELLOWISH BROWN SILTY SAND WITH COBBLES AND BOULDERS (SM)** Dry, loose, fine to coarse angular to subrounded gravel, non-plastic silt, fine to coarse granitic sand. Estimate 15% angular to subrounded cobbles. Common boulders to 3 feet size. (10YR 4/4) (est.15% G/ 65% S/ 20% F)
					4		grades yellowish brown
					6		**YELLOWISH RED SILTY SAND (SM)** Slightly moist, loose to medium dense, non-plastic silt in fine sand. Some dark yellowish brown (10YR 4/6) mottling. Minor angular to subrounded gravel. (5YR 5/8) (est.10% G/ 65% S/ 25% F)
					8		**GRAY / LIGHT OLIVE GRAY SILTY SAND (SM)** Dry, medium dense to dense, non-plastic silt in fine to coarse sand. Some angular to subangular cobbles and boulders. Excavator refusal at 9'. (5Y 6/1) (est.20% G/ 60% S/ 20% F)
					10		TERMINATED @ 9' No Free Water Observed
					12		
					14		
					16		

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JOB # 21073.001 APPR:_____ DATE: 6/11/21

LOG OF TEST PIT TP-3

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE
WASHOE COUNTY NEVADA

PLATE 5

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS				TYPICAL NAMES
COARSE GRAINED SOILS	GRAVELS More than half coarse fraction is larger than No.4 sieve size	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS, GRAVEL SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL SAND MIXTURES
		GRAVELS WITH OVER 12% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL–SAND–SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL–SAND–SILT MIXTURES
	SANDS More than half coarse fraction is smaller than No.4 sieve size	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, POORLY GRADED SAND–SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND–SILT MIXTURE
FINE GRAINED SOILS	SILTS AND CLAYS Liquid limit less than 50		ML	INORGANIC SILTS & VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS Liquid limit greater than 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS
ROCK				COBBLES/BOULDERS
				GRANITIC BEDROCK
				VOLCANIC BEDROCK

KEY TO TEST DATA

				Shear Strength, psf	Confining Pressure, psf	
LL	–	Liquid Limit (in %)	Tx	320	(2600)	Unconsolidated Undrained Triaxial
PL	–	Plastic Limit (in %)	TxCU	320	(2600)	Consolidated Undrained Triaxial
Gs	–	Specific Gravity	UC	2000		Unconfined Compression
SA	–	Sieve Analysis				Friction Angle; Cohesion, psf
Consol	–	Consolidation	DS	36°	400	Consolidated Drained Direct Shear

SAMPLE DESIGNATION

- STANDARD PENETRATION TEST SAMPLE
- 2½" OD MODIFIED CALIFORNIA SAMPLE
- 3" OD MODIFIED CALIFORNIA SAMPLE
- SHELBY TUBE SAMPLE
- AUGER CUTTINGS SAMPLE
- LOCATION OF ROCK CORING
- OTHER "UNDISTURBED" SAMPLE
- OTHER BULK OR CLASSIFICATION SAMPLE

KEY TO SYMBOLS

▽ OBSERVED WATER LEVEL

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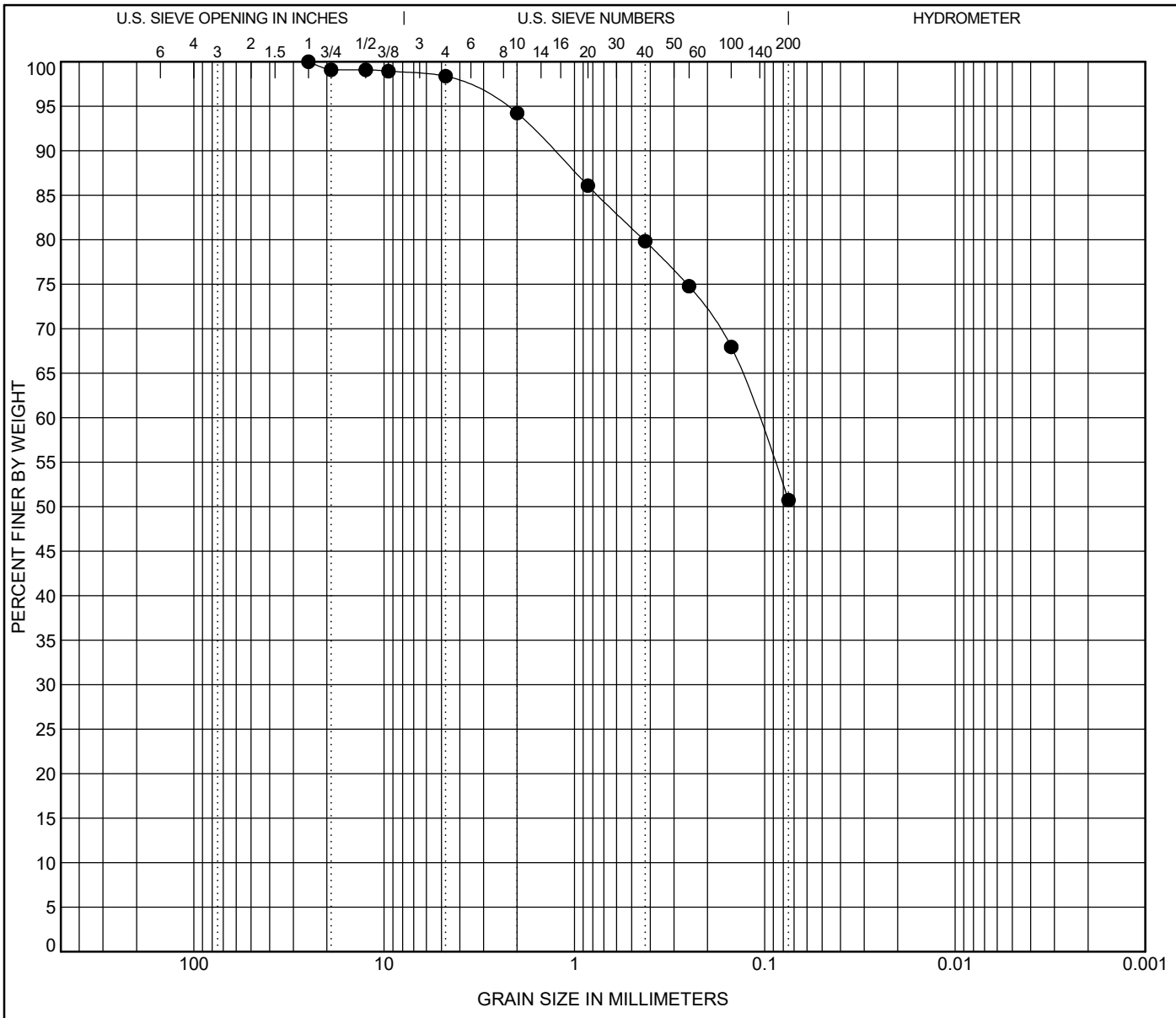
SOIL CLASSIFICATION CHART

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 6



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**TP-1C**	**11.0**	**SANDY LEAN CLAY(CL)**	**35**	**21**	**14**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**TP-1C**	**11.0**	**25**	**0.109**			**1.6**	**47.6**	**50.7**	

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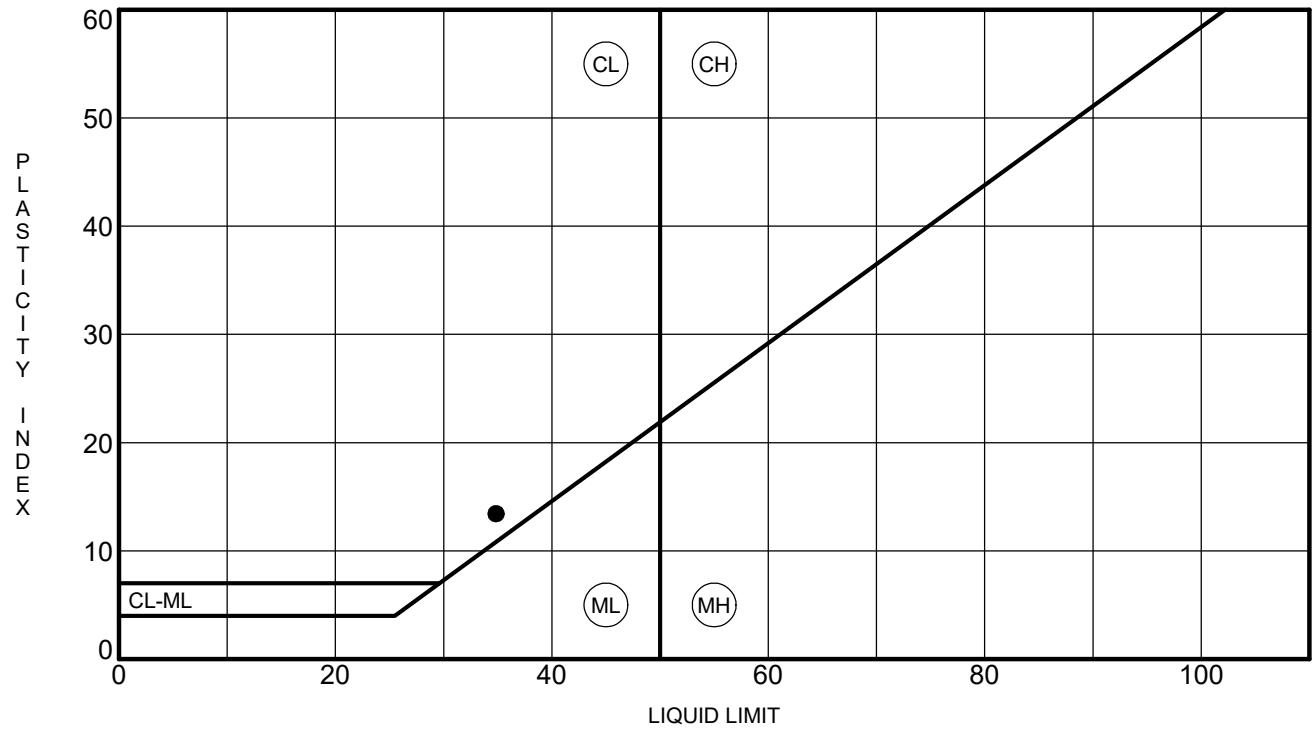
GRAIN SIZE ANALYSIS

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 7

GRAIN SIZE GEOTECH.GPJ MED DATA TEMPLATE 2015A.GDT 6/18/21



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**TP-1C**	**11.0**	**35**	**21**	**14**	**51**	**SANDY LEAN CLAY(CL)**

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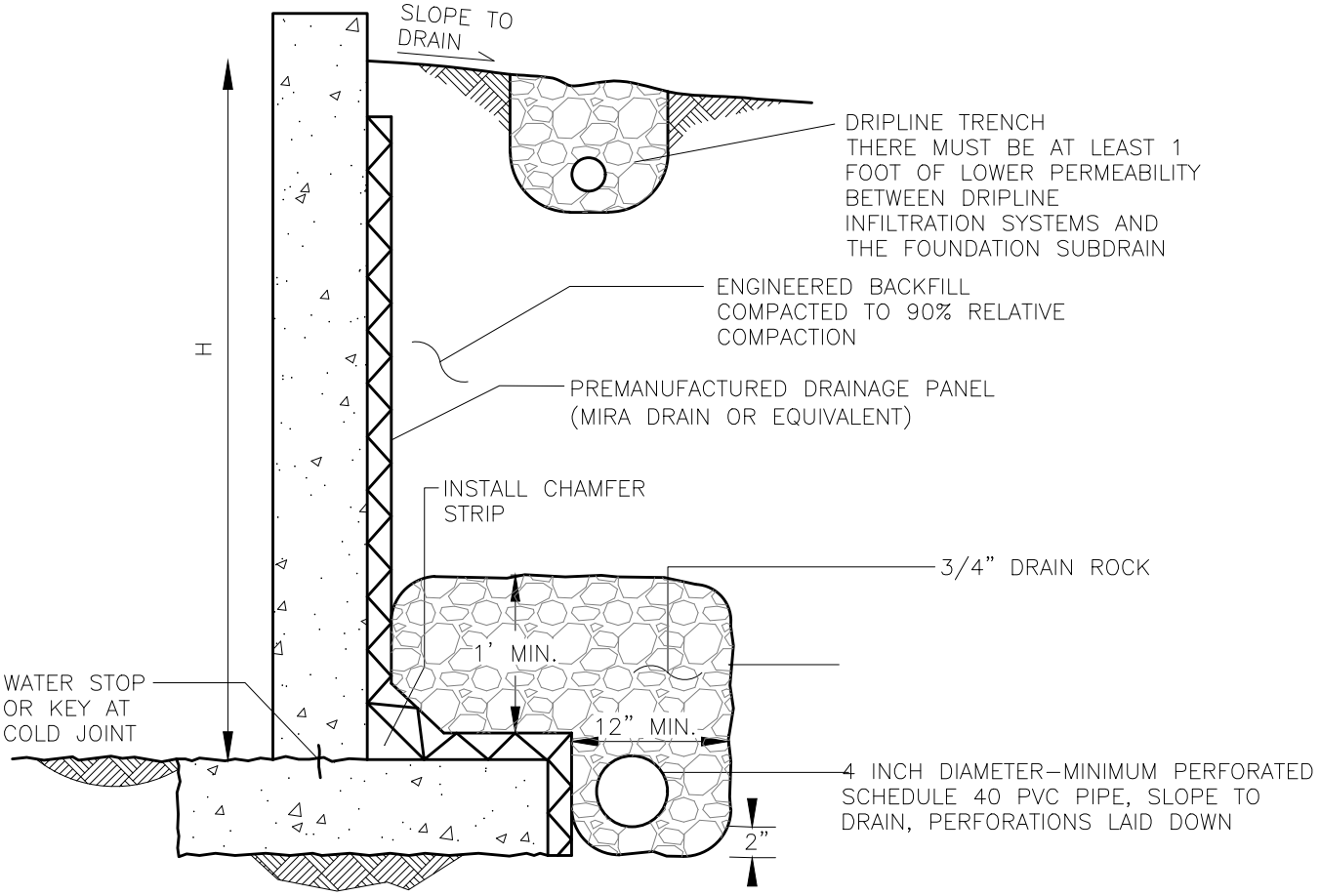
ATTERBERG LIMITS

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 8



NOT TO SCALE

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JOB # 21073.001 APPR: JWP DATE: 05/18/2021

TYPICAL BACK OF WALL DRAIN

GEOTECHNICAL ASSESSMENT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 9

Incline Residential Tahoe/Southwood
Transportation Study

Prepared for

Greenwood Homes
940 Southwood Blvd. #101
Incline Village, NV 89451

Prepared by

LSC Transportation Consultants, Inc.
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Tahoe City, CA 96145
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December 7, 2021

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Chapter 1
Introduction

The Incline Village Residential project is located on the southwest corner of SR 28 (Tahoe Boulevard) and Southwood Boulevard in Incline Village, Nevada. The project would consist of 40 multi-family townhomes. The site location is shown in Figure 1.

The purpose of this report is to present an analysis of the traffic and air quality impacts associated withthe proposed project. Initially, existing traffic conditions near the proposed site are discussed. The proposed land uses associated with the project are then assessed in terms of the generation of new traffic. An appropriate distribution of traffic onto the adjacent roadway system is then identified. Usingthis distribution pattern, the forecasted generated trips are assigned to the nearby roadway system to identify the impact on intersection Level of Service (LOS). In addition, the following areas of impact reevaluated:

1. Site access conditions and driveway spacing
2. Traffic signal warrant
3. Regional Vehicle Miles Traveled (VMT) Analysis
4. Air quality impacts

Figure 1
Incline Village Residential - Site Location

Chapter 2
Existing Conditions

The following discussion presents information regarding existing transportation conditions in the studyarea.

ROADWAY CHARACTERISTICS

The project site is served by the following existing roadways:

State Route 28 (Tahoe Boulevard) is the primary highway serving Lake Tahoe's north shore. It is atwo-lane roadway that runs through Incline Village, Nevada from Tahoe City, California to US 50. To the west of Incline Village, State Highway 28 terminates at the junction of State Route 89 in Tahoe City, California. To the east, the highway turns south and continues along the east shore of Lake Tahoe and ends at US 50. Within Incline Village itself, State Highway 28 is designated as Tahoe Boulevard, with a posted speed limit of 35 miles per hour. The section between Village Boulevard and the eastern Northwood Boulevard/Southwood Boulevard intersection contains a center two-way left turn lane; othersections generally provide one lane in each direction, with turn lanes at major intersections.

Village Boulevard is a two-lane roadway that intersects SR 28 and provides access to primarily residential neighborhoods to the south, and residential neighborhoods as well as government offices tothe north. The posted speed limit is 25 miles per hour.

Northwood Boulevard and Southwood Boulevard are two-lane roadways forming a loop roadway around the central Incline Village area. This loop is designated as Southwood Boulevard to the south of SR 28 and Northwood Boulevard to the north of SR 28. To the west of Village Boulevard, the twoboulevards meet at a signalized intersection with SR 28. To the east of Village Boulevard, both meet at anunsignalized intersection with SR 28, controlled by stop signs on the Boulevard approaches to the highway. The posted speed limit is 25 miles per hour.

EXISTING TRAFFIC VOLUMES

This study is based on typical summer traffic conditions. PM turning-movement counts were conducted by LSC staff at the SR 28/Northwood Blvd/Southwood Blvd study intersection from 3:30 PM to 5:30 PM on Thursday, June 3, 2021. PM turning-movement counts were conducted by LSC at the SR 28/Village Blvd study intersection from 3:30 PM to 5:30 PM on Wednesday, June 2, 2021. Nevada Department of Transportation (NDOT) monthly variation was analyzed at the permanent location SR 28 (Tahoe Blvd) 915feet north of Lakeshore Drive/Pinion Drive. In 2019, July was determined to be the peak month. The volumes from our counts were increased using a growth factor of 1.2 to adjust the counts to peak monthconditions. The resulting 'existing no project' peak-hour traffic volumes are shown in Table 1.

Table 1: Incline Village Residential - Peak Hour Intersection Traffic Volumes

Intersection	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	
Existing No Project													
SR 28/Village Blvd	113	267	86	131	185	73	93	479	104	109	458	120	2218
SR 28/Southwood Blvd/Northwood Blvd (East)	22	21	63	29	15	39	44	611	63	40	561	27	1533
Southwood Blvd/Site Access	0	105	0	0	118	0	0	0	0	0	0	0	223
Project Net Impact													
SR 28/Village Blvd	0	0	0	0	0	0	0	3	0	0	2	0	5
SR 28/Southwood Blvd/Northwood Blvd (East)	3	0	1	0	1	0	0	0	5	2	0	0	12
Southwood Blvd/Site Access	1	0	0	0	0	8	4	0	1	0	0	0	14
Existing Plus Project													
SR 28/Village Blvd	113	267	86	131	185	73	93	482	104	109	460	120	2223
SR 28/Southwood Blvd/Northwood Blvd (East)	25	21	64	29	16	39	44	611	68	42	561	27	1545
Southwood Blvd/Site Access	1	105	0	0	118	8	4	0	1	0	0	0	237

Source: LSC Transportation Consultants, Inc.

EXISTING TRANSIT CONDITIONS

Transit services in the North Shore area are provided through the Tahoe Truckee Area Regional Transportation (TART). The bus service in this area is the TART Mainline. The Mainline Route travels the western shore of Lake Tahoe from Tahoma to the north shore at Incline Village. It operates between 6:00AM and 9:30 PM, providing one run per hour. Existing bus stops are conveniently located along SR 28 at Christmas Tree Village, Raley's, and Northwood Blvd and on Southwood Blvd at the Incline State Park within the vicinity of the project site.

In the summer of 2021, a pilot "microtransit" transit service is being operated, marketed as TART Connect. It provides free rides for passengers making app requests from 8 AM to Midnight 7 days a week. Three zones are being operated, including an Incline Village / Crystal Bay zone that encompassesthe project site.

EXISTING BICYCLE AND PEDESTRIAN CONDITIONS

Bicycle Facilities

Bicycle paths, bicycle routes and bicycle lanes are provided in the vicinity of the project. A Class I bikeway (multipurpose walking and bicycling path) can be found along Village Blvd from College Drive south to Lake Shore Blvd and along the entirety of Lake Shore Blvd. A bikeway is also located starting at the eastern Southwood Blvd/SR 28 intersection that loops around clockwise and ends on Northwood Blvd at the Incline Elementary School. Class II bikeways (bike lanes) can be found along SR 28 from the western Lake Shore Blvd intersection to the eastern Lake Shore Blvd intersection.

Pedestrian Facilities

Within the vicinity of the site, multipurpose walking and bike paths are provided along SR 28 and Southwood Blvd. The SR 28/Northwood Blvd/Southwood Blvd intersection has pedestrian crosswalks on all four sides of the intersection as well as a Rectangular Rapid-Flashing Beacon (RRFB) in the East and West directions. Another RRFB is placed along SR 28 in front of the Raley's driveway. At the SR 28/VillageBlvd intersection, crosswalks can be found on the west, east and south approaches of the signalized intersection.

Overall Non-Auto Access

In summary, the site is served by relatively good transit and bicycle/pedestrian access opportunities. The location near major trip generators (such as shopping) also makes the site relatively conducive to non- auto travel. Specific non-auto reductions are discussed in Chapter 3.

EXISTING AIR QUALITY CONDITIONS

Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance ofthe natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment.

Regional Setting

Many important factors determine local and regional air quality, with the most critical being the quantity, type, and location of pollution sources. Climatic conditions, such as wind speed and direction,temperature gradients, and inversions and precipitation interact with the physical features of the landscape to determine the movement and dispersion of air pollutants.

Climate

The Lake Tahoe Air Basin is surrounded by various mountain ranges within the Sierra Nevada. The Tahoe Basin's climate is cool and dry in the summer and cold and wet in the winter. Temperatures can vary froma daily mean of 60 degrees Fahrenheit (15.6 degrees Celsius) in the summer to about 20 degrees Fahrenheit (-6.7 degrees Celsius) in the winter. Diurnal temperature ranges combine to form characteristics that affect air quality on a daily and seasonal basis. Temperature inversions with the regionare generally caused by nighttime cooling of the land surface, which occurs at a faster rate than the cooling of the overlying air. These inversions can trap air pollutants near their source by limiting vertical mixing. These conditions occur most frequently in the winter.

The enclosed nature of the basin and the large diurnal temperature range combine to form specific air basin characteristics that affect air pollution concentrations on a daily and seasonal basis. Relevant to thepresent discussion are the issues of mixing height and temperature inversions. The "mixing height" is theheight or thickness of the air blanket available for dispersion of airborne pollutants emitted near the ground surface.

Normally, air temperature decreases with an increase in elevation. When a "temperature inversion" occurs, however, temperatures within a layer of air increase with height. The two issues are related inthat the presence of a temperature inversion reduces or lowers the mixing height normally available, thereby lessening the dispersion potential for pollutants in the air basin.

Inversions will trap pollutants near their emission source by precluding vertical mixing processes from dispersing the pollutants. Consequently, potential for high pollutant concentrations is greatest duringstrong, persistent, low-level radiation inversion conditions, which generally occur in the Lake Tahoe region during the winter months.

In the Lake Tahoe Air Basin, inversions are generally caused by nocturnal radiational cooling of the land surface, which occurs at a rate slower than the cooling of the overlying air. During summer months, the morning inversion is broken up by strong surface heating, usually by 9:00 AM to 10:45 AM. Thus, by early morning, mixing heights have typically increased to over 5,000 feet with strong vertical mixing. By mid-evening, the inversion slowly begins to form again, peaking during the early morning.

During winter months, surface heating is less pronounced, and the morning inversion may persist untilnoon (~50% of the time) or later. Consequently, the Lake Tahoe Basin exhibits a high potential for air pollution during the early morning hours, especially during the winter.

Standards and Thresholds

Federal, state, and regional standards exist for ambient air quality in the Tahoe Basin. The air quality plan element of the integrated regional transportation plan focuses on the need for air quality control strategies. The various federal, State of Nevada, and TRPA standards are listed in Table 2.

Table 2: Applicable Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standards		Nevada Standards	TRPA Standards
		Primary	Secondary	Concentration	Concentration
Ozone (O_3)	1 Hour	No Standard	No Standard	No Standard	0.08 ppm
	8 Hour	0.070 ppm	Same as Primary	0.070 ppm	No Standard
Carbon Monoxide (CO)					
	1 Hour	35 ppm	No Standard	35 ppm	No Standard
	8 Hour	9 ppm	No Standard	9 ppm below 5000' 6 ppm above 5000'	6 ppm
Nitrogen Dioxide (NO_2)	1 Year	53 ppb	Same as Primary	53 ppb	Maintain NO_x emissions at or below 1981 levels
	1 Hour	100 ppb	No Standard	100 ppb	No Standard
Sulfur Dioxide (SO_2)	1 Year	No Standard	No Standard	0.030 ppm	No Standard
	24 Hour	No Standard	No Standard	0.14 ppm	No Standard
	3 Hour	No Standard	0.5 ppm	0.5 ppm	No Standard
	1 Hour	75 ppb	No Standard	75 ppb	No Standard
Particulate Matter (PM_{10})	1 Year	No Standard	No Standard	No Standard	50 $\mu g/m^3$ in the portion of the region within Nevada
	24 Hour	150 $\mu g/m^3$	Same as Primary	150 $\mu g/m^3$	150 $\mu g/m^3$ in the portion of the region within Nevada
Fine Particulate Matter ($PM_{2.5}$)	1 Year	12 $\mu g/m^3$	15 $\mu g/m^3$	12 $\mu g/m^3$	15 $\mu g/m^3$ in the portion of the region within Nevada
	24 Hour	35 $\mu g/m^3$	Same as Primary	35 $\mu g/m^3$	35 $\mu g/m^3$
Sulfates	24 Hour	No Standard	No Standard	No Standard	No Standard
Lead	Rolling 3-month average	0.15 $\mu g/m^3$	Same as Primary	0.15 $\mu g/m^3$	No Standard
Hydrogen Sulfide	1 Hour	No Standard	No Standard	0.08 ppm	No Standard
Vinyl Chloride	24 Hour	No Standard	No Standard		No Standard
Visibility Reducing Particles	8 Hour (Observation)	No Standard	No Standard	No Standard	Regional 97 mi (156 km), 50% of the year 71 mi (115 km), 90% of the year Sub-regional 48 mi (78 km), 50% of the year 19 mi (31 km), 90% of the year

Source: NAAQS Table, United States Environmental Protection Agency (accessed June 2021)

Source: NAC 445B.22097 State standards of quality for ambient air (NRS 445B.210), Nevada Administrative Code (accessed June 2021)

Source: TRPA Regional Plan, Attachment 1: Resolution 82-11 Exhibit A, admended May 23, 2018

Attainment Designations

Air quality in most areas of the Lake Tahoe Air Basin is good. As shown in Table 3, the Lake Tahoe Air Basin met all the federal and state standards. The region was in non-attainment on the California side of the TRPA PM10 standard which is based on 2015 data (the most recent data available) but was shown as attainment on the Nevada side.

Table 3: Lake Tahoe Air Basin Attainment Designations

Pollutant	Federal	Nevada	TRPA
Ozone	Unclassified/Attainment	Unclassified/Attainment	Attainment
Carbon Monoxide	Unclassified/Attainment	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Unclassified/Attainment	–
Particulate Matter (PM10)	Unclassified/Attainment	Unclassified/Attainment	Attainment[1]
Particulate Matter (PM2.5)	Unclassified/Attainment	Unclassified/Attainment	Attainment
Lead	Unclassified/Attainment	Unclassified/Attainment	–
Hydrogen Sulfide	–	Unclassified/Attainment	–
Visibility Reducing Particles	–	–	Attainment

[1]Attainment on Nevada side but non-attainment on California side.

Source: U.S. EPA, June 2021.

Source: Tahoe Regional Planning Agency (TRPA) Threshold Evaluation Report, 2015.

Source: Area Designations Maps / State and National, California Air Resources Board, December 2018.

Chapter 3
Trip Generation, Distribution, and Assignment

TRIP GENERATION

The first step in the analysis of future traffic impacts is to prepare an estimate of the number of trips generated by the existing site and the proposed project. Trip generation is the evaluation of the number of vehicle-trips that will either have an origin or destination at the project site. Daily Vehicle-Trip Ends (DVTE) and Peak Hour Vehicle-Trip Ends (PHVTE) need to be determined in order to analyze the potentialimpacts from the proposed project.

Full Buildout includes construction of the 40 multi-family units. The trip generation analysis for the proposed project land uses is summarized in Table 4.

Standard daily trip generation rates are provided in the Tahoe Regional Planning Agency's (TRPA) *Trip Table* (TRPA, 2020) and peak-hour rates are provided in the Institute of Transportation Engineers (ITE)*Trip Generation, 10th Edition Manual* (ITE, 2017). These standard rates are shown in Table 4.

Reduction for Non-Auto Trips

Non-auto trips, such as trips made to/from the site via bike, walking or transit, reduce the number of vehicle trips generated by the project. *2018 Summer TRPA Travel Mode Share Survey* data was reviewed.Data from the surveys conducted at locations at Incline Village near the Raley's and at the Incline Village Recreation Center. Based on responses from this group (with 60 data points), the non-automotive trip percentage was approximately 40 percent. Due to the project's location relative to commercial and shopping as well as the high school, the connecting bike and pedestrian paths, the nearby employment locations, a reduction of 20 percent non-auto travel is applied to the residential units. The non-auto reduction is less than that found at the commercial center (40 percent) due to the home to work trips and home to recreation trips which were not reflected in the commercial center area.

Trip Generation at Site Driveway

Multiplying the land use quantities by the trip rates and applying reductions for non-auto trips yields thevehicle trips generated at the site driveway for proposed project conditions. As shown in Table 4, the proposed land uses are forecasted to generate a total of approximately 174 one-way daily vehicle trips (DVTE) at the site driveway on a weekday, including 14 PM peak-hour vehicle-trips (9 inbound plus 5 outbound).

TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of site-generated trips is defined based upon the following:

1. The site's location relative to complementary land uses and regional access points.
2. The observed pattern of existing traffic movements.
3. The driveway on SR 28 will be used exclusively for emergency access. As a result, all trips will be to/from the driveway on Southwood Boulevard.

Trip distribution patterns for vehicle trips made to/from the project are estimated and the results areshown in Table 5.

Table 4: Incline Village Residential - Trip Generation

Description	Quantity	Units	ITE Land Use Category	ITE Land Use Code	Trip Generation Rates [1]				Reduction for Non-Auto Access	Vehicle Trips at Site Driveways			
					Daily	PM Peak Hour				Daily	PM Peak Hour		
						In	Out	Total			In	Out	Total
Multi Family Residence	40	DU	Multi Family Housing (Mid-Rise)	221	5.44	Fitted Curve			20%	174	9	5	14

DU= Dwelling Unit

Note 1: TRPA daily rates follow ITE for these land uses. ITE Peak hour rate.

Source: LSC Transportation Consultants, Inc., Tahoe Regional Planning Agency (TRPA) Trip Table, and Institute of Transportation Engineers Trip Generation (10th Edition)

Table 5: Incline Village Residential - Trip Distribution	
To/From	Percent
South on Southwood Blvd	15%
North on Northwood Blvd	10%
East on SR 28	20%
SR 28 Between Village and Northwood/Southwood	20%
West on SR 28	35%
Total	***100%***
Source: LSC Transportation Consultants, Inc.	

The site-generated traffic volumes are assigned through the study intersections by applying the distribution percentages to the peak-hour vehicle trips. The resulting PM peak-hour traffic volumes estimated to be generated by the full buildout of the project are shown in Table 1. The project-generatedpeak-hour intersection turning movement volumes are then added to the 'no-project' volumes, yielding the 'existing with project' peak-hour intersection traffic volumes presented in Table 1.

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Chapter 4
Level of Service

LEVEL OF SERVICE

LOS is a quantitative and qualitative measure of traffic conditions on isolated sections of roadway or intersections. LOS ranges from "A" (with no congestion) to "F" (where the system fails with gridlock or stop-and-go conditions prevailing). Detailed LOS definitions are included in Appendix A. As is the standardfor traffic engineering analyses, intersection LOS is analyzed based upon the procedures presented in the*Highway Capacity Manual* (Federal Highways Administration, 2016) using the Synchro software application (Version 10.3, Trafficware). The LOS calculations are contained in Appendix B for further reference.

LOS Standards

The TRPA LOS standards for the Lake Tahoe Basin, established by the Tahoe Regional Planning Agency (TRPA),are set forth in the 2019 Regional Transportation Plan with the intent that the Region's highway systemand signalized intersections during peak periods shall not exceed the following:

1. LOS C on rural scenic/recreational roads,
2. LOS D in rural developed areas,
3. LOS D on urban roads, or
4. LOS D for signalized intersections - LOS E may be acceptable during peak periods not to exceedfour hours per day.

The Regional Transportation Plan Mobility 2035 (TMPO/TRPA, 2012) also states that: "These vehicle LOS standards may be exceeded when provisions for multimodal amenities and/ or services (such as transit, bicycling, and walking facilities) are adequate to provide mobility for users at a level that is proportional to the project-generated traffic in relation to overall traffic conditions on affected roadways." (pp. 2 – 10).While the Tahoe Regional Planning Compact looks to "reduce the dependency on the private automobile," there are currently no adopted requirements or standards regarding the quality of service of other travel modes (i.e., transit, biking, or walking) that could potentially reduce the demand on the roadway system.
The TRPA does not have a specific adopted standard for unsignalized intersections.

The Washoe County LOS Standards are set forth in the 2050 Regional Transportation Plan with theintent that roadway facilities do not exceed the following:

1. LOS D for all regional roadway facilities projected to carry less than 27,000 ADT at the latest RTPhorizon
2. LOS E for all regional roadway facilities projected to carry 27,000 or more ADT at the latest RTPhorizon
3. LOS F for:
   a. 4th St/Prater Way – Evans Avenue to 15th St
   b. Plumas St – Plumb Ln to California Ave
   c. Rock Blvd – Glendale Ave to Victorian Ave
   d. Virginia St – Kietzke Ln to S McCarran Blvd
   e. Virginia St – Plumb Ln to Liberty St & 8th St to 17th St
   f. Sun Valley Blvd – 2nd Ave to 5th Ave
   g. Intersection of N Virginia St and Interstate 80 ramps

Existing Year Intersection Level of Service

As shown in Table 6, all study intersections currently attain the LOS thresholds during the existing yearcondition without the project with the exception of SR 28/Southwood Blvd/Northwood Blvd. The stop-controlled intersection of SR 28/Southwood Blvd/Northwood Blvd currently operates at LOS F.

With implementation of the proposed project the new site driveways intersecting SR 28 and Southwood Blvd will operate at an acceptable LOS A. The intersection of SR 28/Southwood Blvd/Northwood Blvd willremain at an unacceptable LOS F with a small increase in delay.

Table 6: Incline Village Residential - Existing Intersection LOS Summary

Intersection	Control Type	LOS Threshold	PM Existing No Project Delay (sec/veh)	PM Existing No Project LOS	PM Existing Plus Project Delay (sec/veh)	PM Existing Plus Project LOS
SR 28/Village Blvd	Signalized	D	15.1	B	15.1	B
SR 28/ Southwood Blvd/ Northwood Blvd (East)	TWSC	D	**99.7**	**F**	**105.4**	**F**
Southwood Blvd/Site Access	TWSC	D	0.0	A	9.7	A

BOLD text indicates that LOS standard is exceeded.

TWSC = Two-Way Stop-Control; AWSC = All-Way Stop-Control

NOTE 1: Level of service for signalized intersections is reported for the total intersection.

NOTE 2: Level of service for roundabouts and other unsignalized intersections is reported for the worst movement.

Source: LSC Transportation Consultants, Inc.

Chapter 5
Transportation Impacts

The project would generate approximately 174 new daily one-way vehicle trips and 14 PM peak-hourvehicle trips (9 inbound plus 5 outbound) at the site access driveway. The following areas of transportation impacts are evaluated in this section:

- Analysis of the Need for a New Traffic Signal
- Intersection Level of Service (LOS)
- Site Access Plans
- Vehicle Miles Traveled (VMT)

TRAFFIC SIGNAL WARRANT ANALYSIS

NDOT has established a series of "warrants" to define conditions in which a traffic signal should be provided. This is to ensure that signals are only provided in locations where the benefit outweighs the impacts of a signal (notably, the increase in traffic delays along the major roadway). The need for a new traffic signal at the stop-controlled SR 28/Northwood Blvd/Southwood Blvd (east) is evaluated using the procedure discussed in NDOT *Access Management System and Standards* (November 2017), which relieson the warrants for a traffic signal as defined in the Manual on Uniform Traffic Control Devices (MUTCD).

The MUTCD provides a series of 8 individual warrants, addressing traffic volumes in various periods, pedestrian conditions, safety conditions and other specific factor. Of these warrants, the first to be metin typical conditions (such as at this location) is the "peak hour warrant." This warrant is based on the volume per hour of the major street (total of both approaches) and the volume per hour on the minor street higher volume approach. These volumes are plotted in a chart; if the plotted value is higher than the specified curve, the location meets the peak-hour warrant. As shown in Figure 2, the existing-plus- project volumes fall below the curve, indicating that a traffic signal is not warranted without or with theproject.

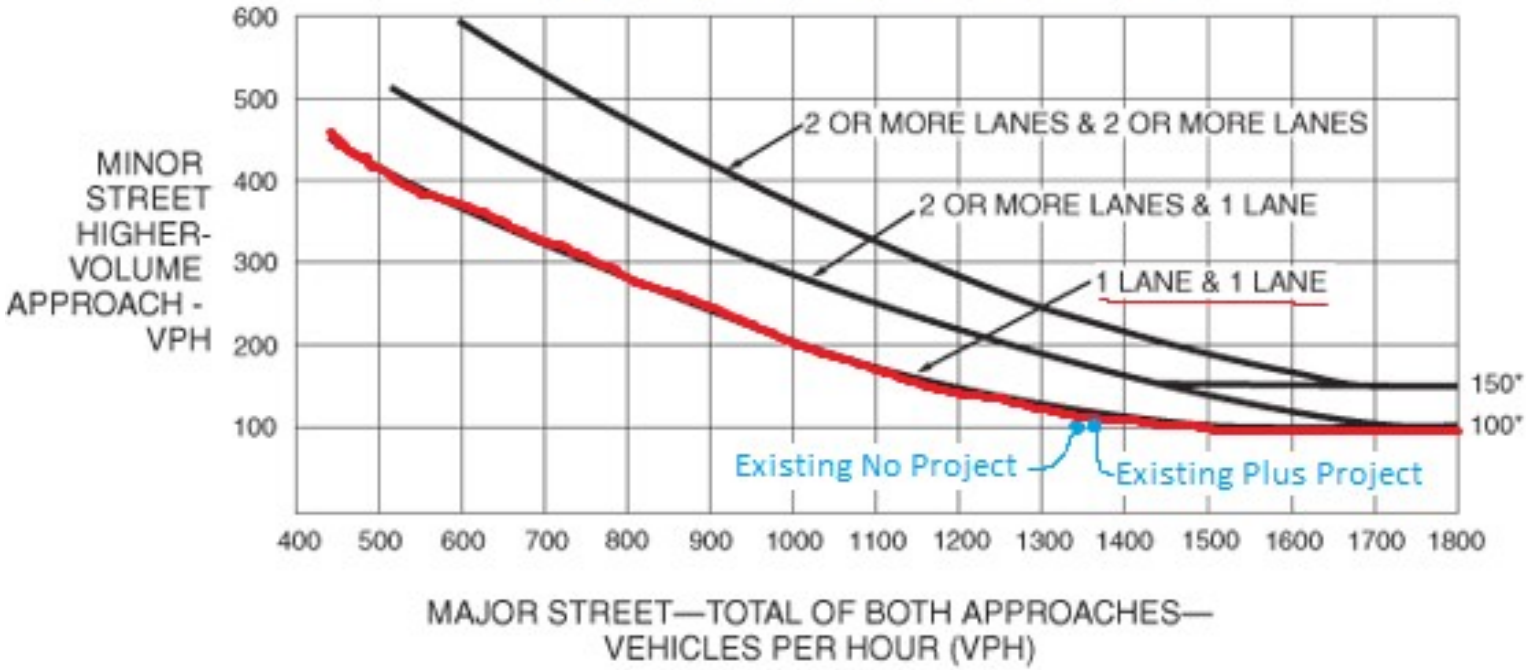
INTERSECTION LEVEL OF SERVICE (LOS)

The site driveway intersection and SR 28/Village operate at an acceptable LOS with the project. As such,no LOS mitigation is required for these intersections.

SR 28/Northwood Blvd/Southwood Blvd (East) operates at an unacceptable LOS F both with and withoutthe project. Even though a traffic signal would improve LOS, it is not warranted at this location.

Additionally, a roundabout would also improve LOS to acceptable levels. While a warrant system specific to roundabouts has not been developed, the signal warrants typically are used as a guideline, which would indicate that a roundabout is not warranted. A roundabout at this location would be an extensive and expensive project, particularly given the grades. In addition, drivers exiting the project onto Southwood and wishing to head west on SR 28 have the option, if they see a long northbound queue at the highway intersection, to make a right turn and access the highway via Village Boulevard. This tends tolimit the increase in delays. Another factor is that the proposed project's traffic would only increase total

Figure 2 - Peak Hour Warrant



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

volumes through the 28/Northwood/Southwood intersection by 0.8 percent. Given these factors,requiring installation of a roundabout would not be appropriate.

Another option for improving access would be to expand the northbound Southwood approach at SR 28 from the existing one-lane configuration. At present, drivers wishing to make a northbound right-turn movement are often behind drivers making the more difficult northbound through or northbound left movements. To evaluate the overall delay (measured in total vehicle-hours of delay) with an additional lane, LOS was evaluated assuming the additional lanes as shown in Table 7.

Table 7: SR 28/Northwood Blvd/Southwood Blvd Northbound Approach Delay with Additional Lanes

Scenario	Northbound Lane Configuration	Northbound Volume by Movement			Northbound Delay by Movement (sec)			Vehicle Hours of Delay	% Change From Existing
		Left	Through	Right	NBL	NBT	NBR		
Existing No Project	LTR	25	21	64	67.8			1.99	--
Existing Plus Project	LTR	25	21	64	80.3			2.44	23%
Existing Plus Project	LT, R	25	21	64	101.7	101.7	14.7	1.54	-22%
Existing Plus Project	L, TR	25	21	64	87.7	28.2	28.2	1.27	-36%

Source: LSC Transportation Consultants, Inc.

This indicates the following:

- At present, northbound drivers in the peak hour experience a total of 1.99 vehicle-hours of delay.
- The additional traffic generated by the proposed project, with the existing single-lane northbound approach, would increase delay to 2.44 vehicle-hours (a 23 percent increase)
- If a right turn lane is provided (shared left/through and separate right turn lanes), total delaywould be 1.54 vehicle-hours of delay, or a 22 percent reduction from current delays.
- Alternatively, if a separate left turn lane is provided along with a shared through/right lane, totaldelay would be 1.27 vehicle-hours or 36 percent below existing levels.

As the right-of-way of Southwood Boulevard is 80 feet in width, this widening can occur within the existing right-of-way. It is therefore recommended that a separate northbound left-turn lane be provided.

SITE ACCESS PLANS

Driver sight distance conditions are evaluated at the site access point.

Driver Sight Distance

Driver sight distance was evaluated at the proposed access intersection. According to the NDOT Road Design Guide (2019), there are two types of sight distance standards that should be met at driveways or intersections for low-speed facilities (44 MPH or Less): stopping sight distance and intersection sight distance. Intersection sight distance

requirements are meant to ensure that adequate time is provided for the waiting driver at an unsignalized intersection or driveway to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed. Intersection sight distance requirements are based upon the need for a driver to discern a gap of up to 7.5 seconds in oncoming traffic to safely choose an adequate gap. The design intersection sight distance requirements are set forth in Table 9-7 of A Policy on Geometric Design of Highways and Streets (AASHTO Green Book, 2018).

Stopping sight distance is the distance an oncoming driver on the major roadway needs to perceive an object in the travel lane (such as a turning vehicle), react to the object, and come to a safe stop. Stopping sight distance requirement are set forth in the AASHTO Green Book.

LSC staff visited the site and determined the proposed driveway is expected to provide adequate driver stopping sight distance. For intersection sight distance, the Southwood site access is adequate so long as the final landscaping plans do not hinder the intersection sight distance.

Driveway Spacing

The proposed driveway spacing along Southwood Blvd was reviewed. Driveway spacing is adequate and no mitigation needs to be performed.

Site Access Summary

In summary, a review of the site access plans indicates the following:

1. Driver sight distance is acceptable on Southwood Boulevard points so long as the final landscaping plans provide at least 440 feet of corner sight distance.
2. The proposed driveway spacing meets City standards.

VEHICLE MILES TRAVELED (VMT)

VMT analysis was conducted based on TRPA's "*TRPA Project Impact Assessment Guidelines*" (TRPA Draft, June 2021). This project is located in Project Impact Assessment Zone 69. The current project impact assessment process, based on daily vehicle trip ends (DVTE) identifies projects in town and regional centers that produce less than 200 DVTE:1,300 VMT as having an insignificant effect and so not requiring additional analysis." Because the project has less than the 200 DVTE requirement, the project is considered to have an insignificant effect. VMT is calculated but does not have to be considered against the standard of significance.

The projects VMT is calculated as the 'zone VMT per capita' multiplied by the 'zone persons per household' multiplied by the number of proposed units. As shown in Table 8, the resulting VMT from the residential units would total 850 VMT.

Table 8: Incline Village Residential - VMT Analysis

Trip Type	Zone VMT per Capita[1]	Zone Persons per Household	Number of Proposed Units	Average Annual Daily VMT
Residential	9.24	2.30	40	850

Note 1: TRPA zone VMT per Capita for PIA zone 69

Source: LSC Transportation Consultants, Inc.

CONCLUSIONS

- The project is forecasted to generate a total of approximately 174 one-way daily vehicle trips (DVTE) at the site driveways on a weekday, including 14 PM peak-hour vehicle-trips (9 inbound plus 5 outbound).
- The LOS at the site access driveway and SR 28/Village Blvd would remain acceptable with the project.
- The LOS at the SR 28/Northwood Blvd/Southwood Blvd intersection does not meet LOS standards without the project, which would be exacerbated by the proposed project. A review of improvement options indicates that total delay can be reduced from existing delays on the key northbound approach by providing a separate northbound left-turn lane. While delays exceeding the LOS standard will still occur, this will be an overall improvement from existing conditions.
- The proposed site access driveway spacing on Southwood Boulevard meets the City Standards.
- The proposed driveway on Southwood Boulevard is expected to provide adequate driver sight distance so long as the final landscaping plans do not hinder the corner sight distance.
- The project is exempt from a full VMT analysis and will generate about 850 total VMT.

Appendix A

LOS DESCRIPTIONS

DESCRIPTIONS OF LEVELS OF SERVICE

The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A level of service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with level of service A representing the best operating conditions and level of service F the worst.

Level of Service Definitions

In general, the various levels of service are defined as follows for uninterrupted flow facilities:

- **Level of service A** represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

- **Level of service B** is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.

- **Level of service C** is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

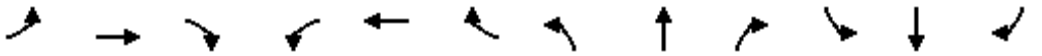
- **Level of Service D** represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

- **Level of service E** represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to “give way” to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

- **Level of service F** is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level of service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow which causes the queue to form, and level of service F is an appropriate designation for such points.

Appendix B

LOS OUTPUT



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	479	104	109	458	120	113	267	86	131	185	73
Future Volume (veh/h)	93	479	104	109	458	120	113	267	86	131	185	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	521	113	118	498	130	123	290	93	142	201	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	707	153	298	679	177	415	493	158	336	465	183
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	798	1489	323	793	1430	373	1099	1357	435	1000	1278	502
Grp Volume(v), veh/h	101	0	634	118	0	628	123	0	383	142	0	280
Grp Sat Flow(s),veh/h/ln	798	0	1812	793	0	1803	1099	0	1792	1000	0	1780
Q Serve(g_s), s	5.8	0.0	14.0	7.0	0.0	13.9	4.7	0.0	8.6	6.6	0.0	5.9
Cycle Q Clear(g_c), s	19.7	0.0	14.0	21.0	0.0	13.9	10.6	0.0	8.6	15.2	0.0	5.9
Prop In Lane	1.00		0.18	1.00		0.21	1.00		0.24	1.00		0.28
Lane Grp Cap(c), veh/h	300	0	860	298	0	856	415	0	652	336	0	647
V/C Ratio(X)	0.34	0.00	0.74	0.40	0.00	0.73	0.30	0.00	0.59	0.42	0.00	0.43
Avail Cap(c_a), veh/h	308	0	879	306	0	874	415	0	652	336	0	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	10.5	19.0	0.0	10.5	15.9	0.0	12.7	18.9	0.0	11.9
Incr Delay (d2), s/veh	0.7	0.0	3.2	0.9	0.0	3.2	1.8	0.0	3.9	0.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.8	1.2	0.0	4.7	1.3	0.0	3.7	1.5	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	13.7	19.8	0.0	13.6	17.7	0.0	16.6	19.7	0.0	12.3
LnGrp LOS	B	A	B	B	A	B	B	A	B	B	A	B
Approach Vol, veh/h		735			746			506			422	
Approach Delay, s/veh		14.5			14.6			16.9			14.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		27.5		22.0		27.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		18.0		24.0		18.0		24.0				
Max Q Clear Time (g_c+I1), s		12.6		21.7		17.2		23.0				
Green Ext Time (p_c), s		1.4		1.1		0.2		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	611	63	40	561	27	22	21	63	29	15	39
Future Vol, veh/h	44	611	63	40	561	27	22	21	63	29	15	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	664	68	43	610	29	24	23	68	32	16	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	639	0	0	732	0	0	1534	1519	698	1551	1539	625
Stage 1	-	-	-	-	-	-	794	794	-	711	711	-
Stage 2	-	-	-	-	-	-	740	725	-	840	828	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	945	-	-	873	-	-	95	119	440	92	116	485
Stage 1	-	-	-	-	-	-	381	400	-	424	436	-
Stage 2	-	-	-	-	-	-	409	430	-	360	386	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	945	-	-	873	-	-	71	107	440	60	105	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	71	107	-	60	105	-
Stage 1	-	-	-	-	-	-	362	380	-	402	415	-
Stage 2	-	-	-	-	-	-	341	409	-	271	366	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.6	67.8	99.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	163	945	-	-	873	-	-	117
HCM Lane V/C Ratio	0.707	0.051	-	-	0.05	-	-	0.771
HCM Control Delay (s)	67.8	9	-	-	9.3	-	-	99.7
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	4.2	0.2	-	-	0.2	-	-	4.4

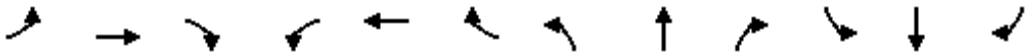
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	105	118	0
Future Vol, veh/h	0	0	0	105	118	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	114	128	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	242	128	128	0	-	0
Stage 1	128	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	746	922	1458	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	746	922	1458	-	-	-
Mov Cap-2 Maneuver	746	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1458	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	482	104	109	460	120	113	267	86	131	185	73
Future Volume (veh/h)	93	482	104	109	460	120	113	267	86	131	185	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	524	113	118	500	130	123	290	93	142	201	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	709	153	297	681	177	414	493	158	335	464	182
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	796	1491	322	791	1431	372	1099	1357	435	1000	1278	502
Grp Volume(v), veh/h	101	0	637	118	0	630	123	0	383	142	0	280
Grp Sat Flow(s),veh/h/ln	796	0	1812	791	0	1803	1099	0	1792	1000	0	1780
Q Serve(g_s), s	5.8	0.0	14.1	7.0	0.0	14.0	4.7	0.0	8.6	6.6	0.0	5.9
Cycle Q Clear(g_c), s	19.8	0.0	14.1	21.1	0.0	14.0	10.6	0.0	8.6	15.2	0.0	5.9
Prop In Lane	1.00		0.18	1.00		0.21	1.00		0.24	1.00		0.28
Lane Grp Cap(c), veh/h	300	0	862	297	0	857	414	0	651	335	0	646
V/C Ratio(X)	0.34	0.00	0.74	0.40	0.00	0.73	0.30	0.00	0.59	0.42	0.00	0.43
Avail Cap(c_a), veh/h	307	0	878	303	0	873	414	0	651	335	0	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	10.5	19.1	0.0	10.5	15.9	0.0	12.8	19.0	0.0	11.9
Incr Delay (d2), s/veh	0.7	0.0	3.3	0.9	0.0	3.2	1.8	0.0	3.9	0.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.8	1.2	0.0	4.7	1.3	0.0	3.7	1.5	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	13.8	19.9	0.0	13.7	17.8	0.0	16.7	19.8	0.0	12.4
LnGrp LOS	B	A	B	B	A	B	B	A	B	B	A	B
Approach Vol, veh/h		738			748			506			422	
Approach Delay, s/veh		14.5			14.7			16.9			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		27.6		22.0		27.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		18.0		24.0		18.0		24.0				
Max Q Clear Time (g_c+I1), s		12.6		21.8		17.2		23.1				
Green Ext Time (p_c), s		1.4		1.1		0.2		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	11.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	611	68	42	561	27	25	21	64	29	16	39
Future Vol, veh/h	44	611	68	42	561	27	25	21	64	29	16	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	664	74	46	610	29	27	23	70	32	17	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	639	0	0	738	0	0	1543	1528	701	1561	1551	625
Stage 1	-	-	-	-	-	-	797	797	-	717	717	-
Stage 2	-	-	-	-	-	-	746	731	-	844	834	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	945	-	-	868	-	-	94	117	439	91	114	485
Stage 1	-	-	-	-	-	-	380	399	-	421	434	-
Stage 2	-	-	-	-	-	-	405	427	-	358	383	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	945	-	-	868	-	-	69	105	439	59	102	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	105	-	59	102	-
Stage 1	-	-	-	-	-	-	361	379	-	400	411	-
Stage 2	-	-	-	-	-	-	335	404	-	269	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	80.3	105.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	155	945	-	-	868	-	-	115
HCM Lane V/C Ratio	0.771	0.051	-	-	0.053	-	-	0.794
HCM Control Delay (s)	80.3	9	-	-	9.4	-	-	105.4
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	4.8	0.2	-	-	0.2	-	-	4.6

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1	1	105	118	8
Future Vol, veh/h	4	1	1	105	118	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	1	1	114	128	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	249	133	137	0	-	0
Stage 1	133	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	739	916	1447	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	738	916	1447	-	-	-
Mov Cap-2 Maneuver	738	-	-	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1447	-	768	-	-
HCM Lane V/C Ratio	0.001	-	0.007	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	611	68	42	561	27	25	21	64	29	16	39
Future Vol, veh/h	44	611	68	42	561	27	25	21	64	29	16	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	664	74	46	610	29	27	23	70	32	17	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	639	0	0	738	0	0	1543	1528	701	1561	1551	625
Stage 1	-	-	-	-	-	-	797	797	-	717	717	-
Stage 2	-	-	-	-	-	-	746	731	-	844	834	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	945	-	-	868	-	-	94	117	439	91	114	485
Stage 1	-	-	-	-	-	-	380	399	-	421	434	-
Stage 2	-	-	-	-	-	-	405	427	-	358	383	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	945	-	-	868	-	-	69	105	439	59	102	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	105	-	59	102	-
Stage 1	-	-	-	-	-	-	361	379	-	400	411	-
Stage 2	-	-	-	-	-	-	335	404	-	269	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	51.1	105.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	82	439	945	-	-	868	-	-	115
HCM Lane V/C Ratio	0.61	0.158	0.051	-	-	0.053	-	-	0.794
HCM Control Delay (s)	101.7	14.7	9	-	-	9.4	-	-	105.4
HCM Lane LOS	F	B	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.8	0.6	0.2	-	-	0.2	-	-	4.6

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	611	68	42	561	27	25	21	64	29	16	39
Future Vol, veh/h	44	611	68	42	561	27	25	21	64	29	16	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	664	74	46	610	29	27	23	70	32	17	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	639	0	0	738	0	0	1543	1528	701	1561	1551	625
Stage 1	-	-	-	-	-	-	797	797	-	717	717	-
Stage 2	-	-	-	-	-	-	746	731	-	844	834	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	945	-	-	868	-	-	94	117	439	91	114	485
Stage 1	-	-	-	-	-	-	380	399	-	421	434	-
Stage 2	-	-	-	-	-	-	405	427	-	358	383	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	945	-	-	868	-	-	69	105	439	59	102	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	105	-	59	102	-
Stage 1	-	-	-	-	-	-	361	379	-	400	411	-
Stage 2	-	-	-	-	-	-	335	404	-	269	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	41.7	105.4
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	69	246	945	-	-	868	-	-	115
HCM Lane V/C Ratio	0.394	0.376	0.051	-	-	0.053	-	-	0.794
HCM Control Delay (s)	87.7	28.2	9	-	-	9.4	-	-	105.4
HCM Lane LOS	F	D	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.5	1.7	0.2	-	-	0.2	-	-	4.6

NCE Collaboration. Commitment. Confidence.SM

MEMORANDUM

Date:	**1/09/2023**
To:	**Collaborative Design Studio**
From:	**Mary Horvath, PE**
Subject:	**947 Tahoe Boulevard Proposed Infiltration Facilities**

The 947 Tahoe Boulevard development is going to include approximately 58,000 square feet of impervious area which will generate a volume of 4,800 cubic feet of runoff in the 20-year, 1-hour storm event (1-inch of precipitation depth). The preliminary design includes underground storage/infiltration with a total treatment capacity of approximately 7,200 cubic feet. The infiltration facilities will be 24" or 30" High Density Polyethylene (HDPE) perforated pipe within drain rock galleries that will lie beneath the driveways and landscaped portions of the site.

Figure 1 shows the preliminary drainage of the site to four infiltration galleries:

- A – within the southern driveway (South Gallery)
- B – within a landscape area near the west side of the development (West Gallery)
- C - within the landscaped portion of the site along the eastern boundary (East Gallery)
- D – a small crossroad trench at the eastern exit of the site (Transverse Drain)

The TRPA BMP Calculation Spreadsheet is attached showing the volume of runoff compared to the volume of the proposed infiltration galleries. The BMP void calculator is also included.

The grading and drainage design sheets as well as the infiltration gallery details are attached.

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1885 S. Arlington Ave., Suite 111
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(775) 329-4955

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Reno, Nevada 89509
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STATE OF NEVADA PROFESSIONAL ENGINEER
MICHAEL LEFRANCOIS
No. 20115
Exp.12/31/23
CIVIL

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

PROJECT NO:	1171.01.25
DESIGNED BY:	KH
DRAWN BY:	KH
CHECKED BY: --	DATE --
DATE:	01-09-2023

SHEET TITLE

947 TAHOE
DRAINAGE
EXHIBIT

DRAWING
1

SHEET 1 OF 1

BMP Calculation Spreadsheet

Estimated Soil Erosion Savings of 576.1 pounds per year by doing your BMPs.

Soil erosion is estimated by the treatement volume multiplied by a 250 mg/l concentration plus contributions of source control and deck treatments calculated with the USLE.

Property Address: 937 TAHOE BLVD

***(Start here)* APN:** 132-231-08 APN lookup

Date: 1/9/23

Designed By: MCH

	MAP DATA	ON-SITE DEPTHS
Water Table:	>5ft	
Restriction:	None noted	
Max. Depth of Install:	67 in.	

Map Unit: 7141

Total Drain Rock Quantity (yd^3) 301.4

Total Runoff (ft^3) 4814.7 **Amount Treated** 4814.7

Total Excavation (yd^3) 401.7

Contributing Surface	A South	B West	C East	D T.D.										Total			Total
# of Stories	0	0	0	0													
Length (ft.)																	
Width (ft.)																	
Area (ft2)	27829	13426	15090	1432													
Area (ft^2)	27829	13426	15090	1432	0	0	0	0	0	0	0	0	0		0	0	
Runoff (ft^3)	**2319.1**	**1118.8**	**1257.5**	**119.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Treatment Label:	**A**	**B**	**C**	**D**													
Length (ft.)	174.3	45.0	70.5	16.0													
Width (in.)	112	166	114	48													
Depth (in.)	40	48	48	48													
On-Site Ksat ($^{in}/_{hr}$)																	
mapped Ksat ($^{in}/_{hr}$)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Prefab Void Space (%)	100%	100%	100%	100%													
Average Void Space (%)	56%	52%	56%	52%													
Effective Volume (yd^3)	200.6	92.4	99.2	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Treatment Capacity (ft^3)	**3699.0**	**1543.2**	**1783.9**	**168.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Drain Rock Quantity (yd^3)	147.1	73.9	72.8	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Excess Runoff (ft^3)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**			**0.0**			**0.0**
Excess Capacity (ft^3)	**1379.9**	**424.4**	**526.4**	**49.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**			**0.0**			**0.0**

Contributing Surface			Total				Total				Total				Total
# of Stories															
Length (ft.)															
Width (ft.)															
Area (ft2)															
Area (ft^2)	0	0		0	0	0		0	0	0		0	0	0	0	
Runoff (ft^3)	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	**0.0**
Treatment Label:																
Length (ft.)																
Width (in.)																
Depth (in.)																
On-Site Ksat ($^{in}/_{hr}$)																
mapped Ksat ($^{in}/_{hr}$)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Prefab Void Space (%)																
Average Void Space (%)																
Effective Volume (yd^3)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Treatment Capacity (ft^3)	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	**0.0**
Drain Rock Quantity (yd^3)	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	**0.0**
Excess Runoff (ft^3)			**0.0**				**0.0**				**0.0**					**0.0**
Excess Capacity (ft^3)			**0.0**				**0.0**				**0.0**					**0.0**

Basin

	2:1 (rock lined or vegetated)				5:1 (mowable)			
Contributing Surface								
Length (ft.)								
Width (ft.)								
Area (ft2)								
Area (ft^2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Runoff (ft^3)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Treatment Label:								
Top Length (ft.)								
Top Width (ft.)								
Depth (in.)								
Bottom Length (ft.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom Width (ft.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Volume (yd^3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
On-Site Ksat								
Mapped Ksat	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**
Treatment Capacity (ft^3)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Excess Runoff (ft^3)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Excess Capacity (ft^3)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Notes

Deck Treatments

Deck Label			
Area (ft2)			
Slope (%)			
Slope Length (ft)			
Gravel Treatment Length (ft.)			
Gravel Treatment Width (ft.)			
Additional Treatment See			
Drain Rock Quantity (yd^3)			

Source Control Treatments

Area Label					
Area (ft2)					
Slope (%)					
Slope Length (ft)					
% Cover					
% Canopy					
Treatment					
Drain Rock Quantity (yd3)					

Reviewer Comments

Sheet: 1
of: 1
template 1/5/2021

United States Department of Agriculture
NRCS Natural Resources Conservation Service

This worksheet is intended to provide an estimate of proper dimensions of infiltration structures and represents no guarantee of the adequacy of overall system design.

Average Void % is Determined by: [(Overall Volume - Prefab Volume) x 40% + (Prefab Volume x Prefab Void Space)] / Overall Volume

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
East Gallery	Length (ft.)	70.5	Length (ft.)	70.5								
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)	114		Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)	706.9	or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)	48						Gallons	to	In^3
Treats C	or # of Units	2				15.0		706.9				
	Prefab Void %	100%	Average Void %	**56%**								

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
South Gallery	Length (ft.)	174.4	Length (ft.)	174.3								
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)	111.96		Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)	452.4	or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)	39.96						Gallons	to	In^3
Treats A	or # of Units	2				12.0		452.4				
	Prefab Void %	100%	Average Void %	**52%**								

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
West Gallery	Length (ft.)	45.0	Length (ft.)	45.0								
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)	166.32		Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)	452.4	or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)	39.96						Gallons	to	In^3
Treats B	or # of Units	3				12.0		452.4				
	Prefab Void %		Average Void %	**52%**								

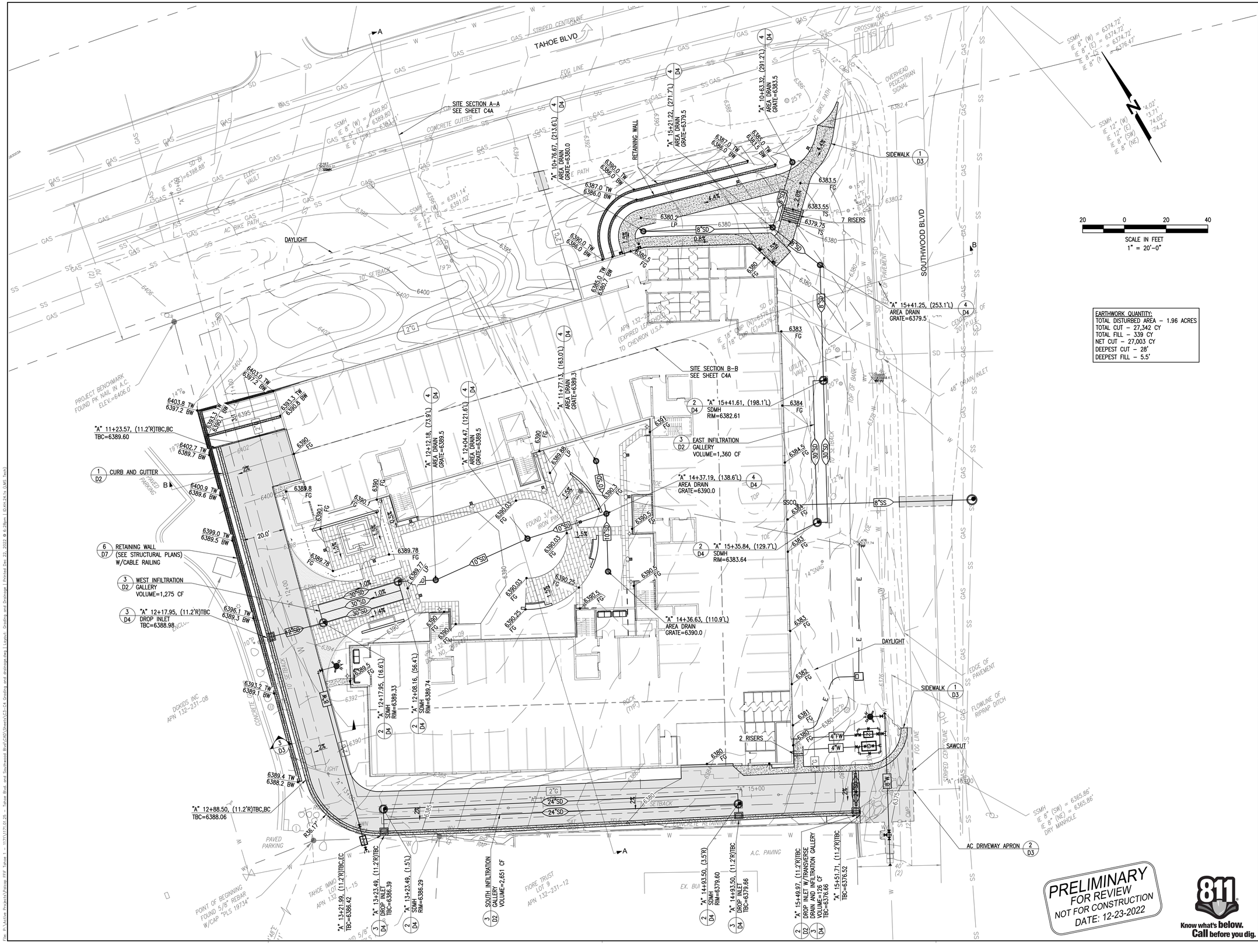
Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
Transverse Drain	Length (ft.)	16.0	Length (ft.)	16.0								
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)	48		Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)	452.4	or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)	48						Gallons	to	In^3
Treats D	or # of Units	1				12.0		452.4				
	Prefab Void %	100%	Average Void %	**52%**								

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
	Length (ft.)		Length (ft.)									
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)			Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)		or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)							Gallons	to	In^3
	or # of Units											
	Prefab Void %		Average Void %									

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
	Length (ft.)		Length (ft.)									
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)			Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)		or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)							Gallons	to	In^3
	or # of Units											
	Prefab Void %		Average Void %									

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
	Length (ft.)		Length (ft.)									
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)			Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)		or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)							Gallons	to	In^3
	or # of Units											
	Prefab Void %		Average Void %									

Treatment Label	Prefab Dimensions		Overall Dimensions			Inches	to	Feet		Feet	to	Inches
	Length (ft.)		Length (ft.)									
	or Cubic Inches		or Cubic Inches									
	Width (in.)		Width (in.)			Radius (in)	to	Cross Sectional Area (in^2)				
Prefab Type	or Cross Sectional Area (in^2)		or Cross Sectional Area (in^2)									
	Depth (in.)		Depth (in.)							Gallons	to	In^3
	or # of Units											
	Prefab Void %		Average Void %									



NCE
1885 S. Arlington Ave. Suite 111
Reno, Nevada 89509
(775) 329-4955 * Fax (775) 329-5098

MICHAEL LEFRANCOIS
PROFESSIONAL ENGINEER STATE OF NEVADA
No. 20115
Exp.12/31/23
CIVIL

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD.
STE 101
INCLINE VILLAGE, NV
89451

NO.	DATE	DESCRIPTION

PROJECT NO:	1171.01.25
DESIGNED BY:	KH
DRAWN BY:	KH
CHECKED BY: --	DATE --
DATE:	12–23–2022

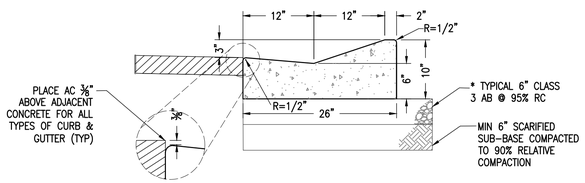
SHEET TITLE

GRADING
AND
DRAINAGE

DRAWING

C3

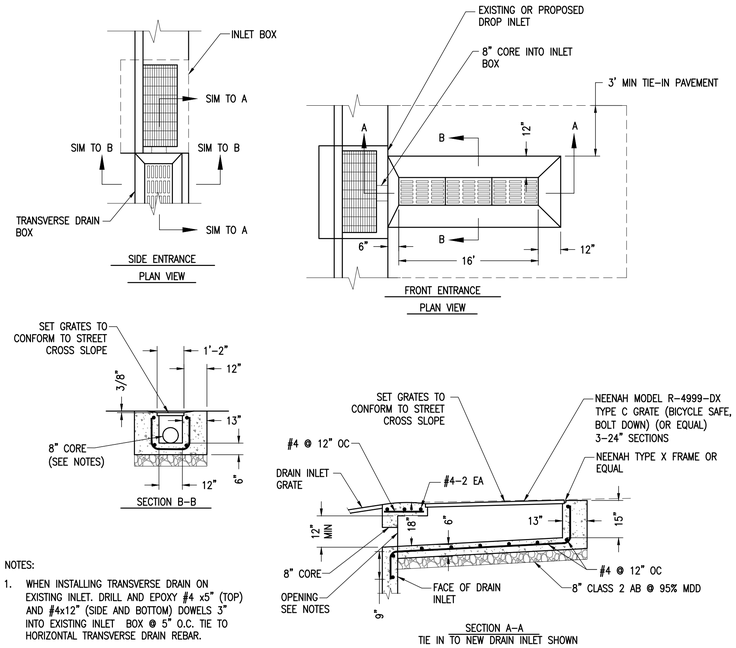
SHEET 4 OF 23



NOTES:

1. ALL BASE MATERIAL SHALL BE COMPACTED AND TESTED BY THE CITY OR BY A THIRD PARTY INSPECTOR AT THE CITY'S DISCRETION PRIOR TO CONCRETE POUR. NOTIFY THE CITY AT LEAST 24 HRS PRIOR TO POUR.
2. CONTRACTOR SHALL CONTACT INSPECTOR FOR SCHEDULING CURB STRINGLINE INSPECTION AT LEAST 24 HRS PRIOR TO CONCRETE POUR.
3. ALL FLOWLINES SHALL BE WATER TESTED BEFORE ACCEPTANCE FOR PAYMENT. CONTRACTOR SHALL CONTACT INSPECTOR TO SCHEDULE WATER TESTING.
4. LOCATE 2" DEEP TRANSVERSE SCORES AT 10' INTERVALS IN CURB AND GUTTERS. INSTALL EXPANSION JOINTS AT ALL COLD JOINTS.
5. (2) #5x12" DOWELS ARE REQUIRED AT ALL COLD JOINTS, INCLUDING WHERE NEW CURB AND GUTTER IS TO MEET EXISTING. DOWELS SHALL BE GREASED AND INSTALLED INTO THE CURED CONCRETE CURB AND GUTTER, CENTERED VERTICALLY AND 3" OFF OF EACH SIDE.
6. NO WASHOUT OF TRUCKS AND/OR EQUIPMENT WILL BE ALLOWED ON SITE UNLESS A BASIN IS PROVIDED AND APPROVED BY THE INSPECTOR.
7. CONTRACTOR MUST TRENCH PLATE ALL DRIVEWAYS FOR 72 HOURS AFTER CONCRETE POUR.
8. CITY HAS THE RIGHT TO REJECT CURB FOR NON-CONFORMANCE AND/OR POST CONSTRUCTION DAMAGE.
9. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BMPS, AC CUTS AND REPLACEMENT, REVEGETATION AND ALL OTHER INCIDENTALS ASSOCIATED WITH CURB INSTALLATION.

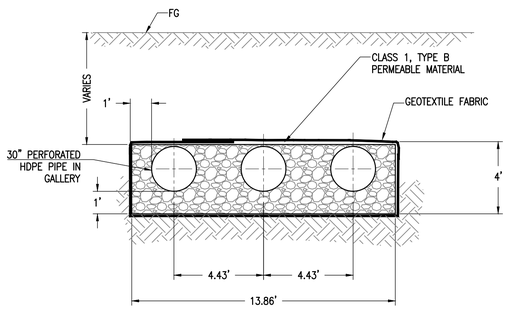
1/D2 CURB AND GUTTER
NTS



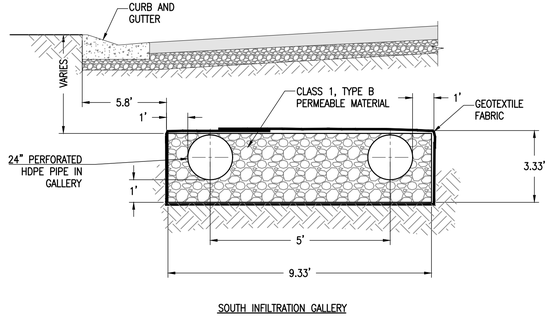
NOTES:

1. WHEN INSTALLING TRANSVERSE DRAIN ON EXISTING INLET. DRILL AND EPOXY #4 x5" (TOP) AND #4x12" (SIDE AND BOTTOM) DOWELS 3" INTO EXISTING INLET BOX @ 5" O.C. TIE TO HORIZONTAL TRANSVERSE DRAIN REBAR.

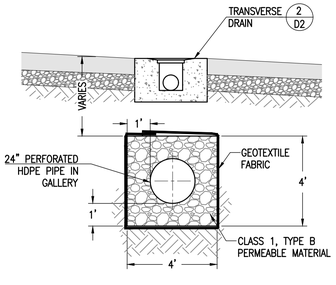
2/D2 TRANSVERSE DRAIN
NTS



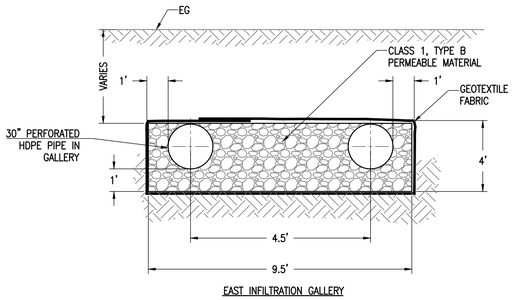
WEST INFILTRATION GALLERY



SOUTH INFILTRATION GALLERY



INFILTRATION GALLERY AT TRANSVERSE DRAIN



EAST INFILTRATION GALLERY

NOTE:
1. SEE DETAIL 3/D3 FOR TRENCH AND BACKFILL REQUIREMENTS.

3/D2 INFILTRATION GALLERY
NTS

PRELIMINARY
FOR REVIEW
NOT FOR CONSTRUCTION
DATE: 12-23-2022

811 Know what's below. Call before you dig.

NCE
1885 S. Arlington Ave. Suite 111
Reno, Nevada 89509
(775) 329-4955 * Fax (775) 329-5098

MICHAEL LEFRANCOIS
Exp.12/31/23
CIVIL
PROFESSIONAL ENGINEER STATE OF NEVADA NO. 20175

947 TAHOE

OWNER

PALCAP FFIF TAHOE 1, LLC
940 SOUTHWOOD BLVD. STE 101
INCLINE VILLAGE, NV 89451

NO.	DATE	DESCRIPTION

PROJECT NO: 1171.01.25
DESIGNED BY: KH
DRAWN BY: KH
CHECKED BY: -- DATE --
DATE: 12-23-2022

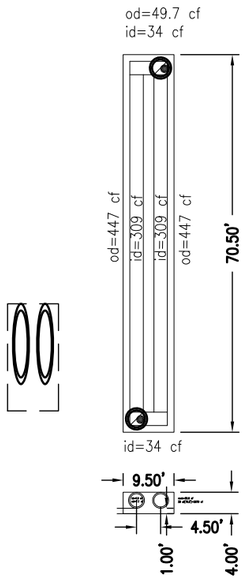
SHEET TITLE

DETAILS

DRAWING D2

SHEET 10 OF 23

EAST GALLERY



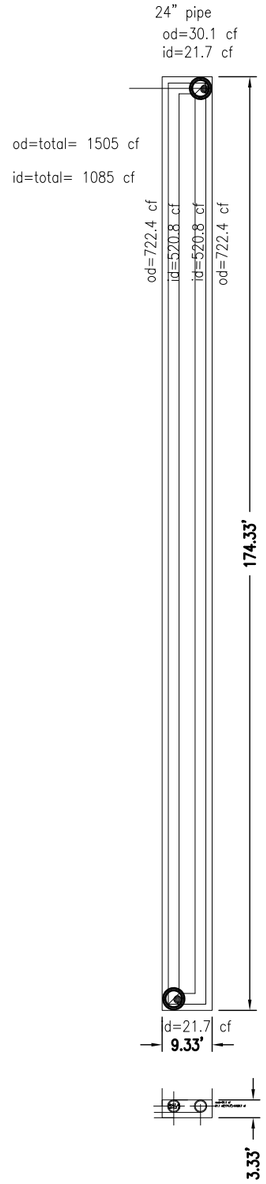
2679 cf basin
−993.4 cf pipe
=1685.6 cf(.4 voids)
=674.2 cf rock voids

674.2 cf rock voids
+686 cf 30" pipe
=1360.2 cf total

infiltration area
669.75 sf basin bottom
564.0 sf sides
76.0 sf ends
=1,309.75 sf

at 2"/hr will infiltrate
218.7 cf/hr

SOUTH GALLERY



5420.7 cf basin
−1505 cf pipe
=3915.7 cf(.4 voids)
=1566.3 cf rock voids

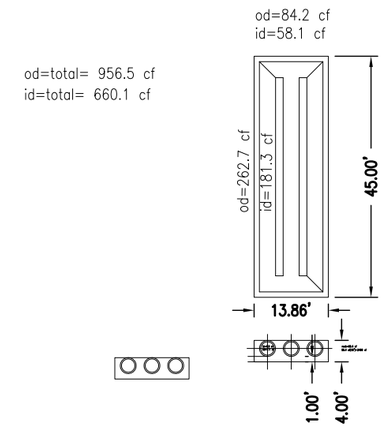
1566.3 cf rock voids
+1085 cf 24" pipe
=2651.3 cf total

infiltration area
1627.2 sf basin bottom
1161.0 sf sides
62.1 sf ends
=2850.3 sf

at 2"/hr will infiltrate
476 cf/hr

WEST GALLERY

30" pipe



2493 cf basin
−956.5 cf pipe
=1536.5 cf(.4 voids)
=614.6 cf rock voids

614.6 cf rock voids
+660.1 cf 30" pipe
=1275 cf total need 1114

infiltration area
669.75 sf basin bottom
564.0 sf sides
76.0 sf ends
=1,309.75 sf

at 2"/hr will infiltrate
218.7 cf/hr

ENTITY INFORMATION

ENTITY INFORMATION

Entity Name:	PAL CAP FFIF TAHOE 1, LLC	**Entity Number:**	E9511692020-1
Entity Type:	Domestic Limited-Liability Company (86)	**Entity Status:**	Active
Formation Date:	10/01/2020	**NV Business ID:**	NV20201906691
Termination Date:	Perpetual	**Annual Report Due Date:**	10/31/2022
Series LLC:	☐	**Restricted LLC:**	☐

REGISTERED AGENT INFORMATION

Name of Individual or Legal Entity:	INCLINE LAW GROUP, LLP	**Status:**	Active
CRA Agent Entity Type:		**Registered Agent Type:**	Commercial Registered Agent
NV Business ID:	NV20131679505	**Office or Position:**	
Jurisdiction:	NEVADA		
Street Address:	264 VILLAGE BLVD STE 104, Incline Village, NV, 89451, USA		
Mailing Address:			
Individual with Authority to Act:	Cassell Von Baeyer		
Fictitious Website or Domain Name:			

OFFICER INFORMATION

☐ **VIEW HISTORICAL DATA**

Title	Name	Address	Last Updated	Status
Manager	Randall Fleisher	8333 Douglas Ave #900, Dallas, TX, 75225, USA	04/14/2021	Active
Manager	Charles L. Butler, II	8333 Douglas Ave #900, Dallas, TX, 75225, USA	04/14/2021	Active

Page 1 of 1, records 1 to 2 of 2

Filing History Name History Mergers/Conversions

Reno Tahoe Geo Associates, Inc.

Consulting Civil Engineers
P.O. Box 18449
Reno, Nevada 89511
PH (775) 853-9100
FAX (775) 853-9199

September 7, 2021
Project No. 21073.001

Tahoe Regional Planning Agency
128 Market Street
Stateline, Nevada 89449

Subject: **Soils/Hydrologic Scoping Report**
Proposed Condominium Complex
941 and 947 Tahoe Boulevard
Incline Village, Washoe County, Nevada
(APN's: 132-231-09 and 132-231-10)

Dear Reviewer:

Reno Tahoe Geo Associates, Inc, (RTGA) is requesting approval of an excavation depth for the attached soils/hydrology application based on previous approvals for nearby parcels, information within our files, and relevant published soil, and geological and topographic information. This letter is transmitted with the completed scoping application and describes the soil and hydrologic conditions at the location of the proposed Southwood Condominium Complex to be located at 941 and 947 Tahoe Boulevard, Incline Village, Washoe County (APN's: 132-231-09 and 132-231-10), (Plates 1 and 2). This letter includes our professional opinion that the proposed excavation will not intercept groundwater.

REFERENCES

The following published and unpublished references were reviewed and serve as the basis of our understanding of the project type and scope:

- Tahoe Regional Planning Agency (TRPA) Spatial Data Downloader, produced by the TRPA accessed May 2021;
- TRPA, 1987 Plan Area Statement Maps, www.trpa.org, assessed May 24, 2021;
- George J. Saucedo, et al., 2005. *Geologic Map of the Lake Tahoe Basin – California and Nevada;*

- Natural Resources Conservation Service (NRCS) *Web Soil Survey in Google Earth*, accessed June 2021;
- *Washoe County Real Property Assessment Data,* Washoe County website accessed June 2021;
- *Soil Hydrologic Approval - Waiver, IVGID Ballfield Improvement Project, 948 Incline Way, Washoe County, NV, APN 127-030-15, TRPA File Number LCAP2019-066,* Tahoe Regional Planning Agency, dated April 23, 2019;
- *Soil Hydrologic Approval - Waiver, 900 Tahoe Boulevard, Washoe County, NV, APN 132-012-04, TRPA File Number LCAP2019-135,* Tahoe Regional Planning Agency, dated June 25, 2019;
- *Soil Hydrologic Approval, Incline Business Park LLC, 919 Incline Court, Washoe County, NV, APN 132-232-15, TRPA File Number LCAP2009-0209,* Tahoe Regional Planning Agency, dated September 17, 2009;
- *Soil Hydrologic Investigation - Approval, 930 Tahoe Boulevard, Washoe County, NV, APN 132-012-02, TRPA File Number LCAP2018-00182,* Tahoe Regional Planning Agency, dated July 23, 2018;
- *Approval of Excavation for Proposed Project Based on Completed Investigation, Educational Field Studies Office, 926 Incline Way, Washoe County, APN 132-231-15, TRPA File #970281*, Tahoe Regional Planning Agency, dated June 3, 1997.

SITE CONDITIONS

The project site is shown on Plate 2. The proposed project site consists of two adjoining parcels located on the southwest corner of the east intersection of Southwood Boulevard and Tahoe Boulevard in Incline Village, Washoe County, Nevada. The corner parcel (947 Tahoe Boulevard) was formerly occupied by a Chevron gas station. The adjoining parcel (941 Tahoe Boulevard) is located on the south and west sides of the corner parcel and formerly had a building used as a restaurant located in the north-central portion of the lot near Tahoe Boulevard. There are existing driveways on both lots. An approximately 4-foot-high retaining wall is located on the west edge of the corner lot along its north–south property line. The formerly developed portions of each lot are approximately level, and the levelled portion of the corner lot is approximately 8 feet lower than the levelled portion of the western lot. The southern portion of this parcel does not appear to have undergone any historic development. Geotechnical test pit locations are shown on Plate 2.

The site is vegetated, where it has not been disturbed, with pine trees, manzanita shrubs, and other xeric upland species. No hydrophilic vegetation (such as firs, willows, or alders) was observed.

There is a single willow bush on the edge of Southwood Boulevard at the driveway entrance to the site, at about Elevation 6,379 feet, adjacent to a storm drain inlet. No other hydrophilic vegetation was noted along the right-of-way for Southwood and Tahoe Boulevard.

PROPOSED IMPROVEMENTS

We understand that a new, five-story condominium complex will be founded with a basement garage. The plan will be approximately C-shaped with three legs approximately 140 to 250 feet long and 60 feet wide. The front face of the building will be approximately 100 feet from Tahoe Boulevard and 30 feet from Southwood Boulevard. The garages will be built on two levels, with an entrance from the uphill, northwest corner to the upper garage level, and an entrance at the southeast corner into a lower garage level. The developer would like to extend the lower parking level under the south and east wings, and as far as approved, under the north wing as well.

The building outline and topographic contours for the site are shown on Plate 3. From Tahoe Boulevard the combined parcels slope from Elevation 6,406 feet at the northwest corner down to Elevation 6,380 feet at the southeast corner where they meet Southwood Boulevard, resulting in an overall site elevation change of 27 feet and an average slope of approximately 7 percent to the southeast. The existing grade within the building footprint varies from Elevation 6,403 feet to 6,382 feet.

The plan (Plate 3) shows the location of two cross sections cut on Plate 4. The finished floor level of the bottom garage level is proposed to be Elevation 6,384, and the bottom footings assuming cantilever concrete retaining walls would conservatively 4 feet lower or Elevation 6,380 feet. Total excavation depth would be 23 feet from existing grade at 6,304 feet. The southern wing would have a maximum excavation depth of approximately 14 feet due to being situated further down the slope.

NEARBY STREAM ENVIRONMENTS

Plate 5 is a map showing that the nearest Stream Environment Zone (SEZ). No springs, seeps, or hydrophilic plants are present on the subject site. Most of the vegetation is dry upland species such as pine and manzanita. The nearest SEZ, Land Capability Zone (Zone 1b) is a minor tributary of Third Creek which drains northwest to southeast approximately 160 feet northeast of the site. The

tributary of Third Creek is incised about 8 to 10 feet below adjacent upland ground surface and Tahoe Boulevard at the intersection with Northwood Boulevard. Based on the topographic elevations using a level survey, the creek level is approximately Elevation 6,378.50 to 6375 feet just north of the intersection. There are rushes and meadow grass to 4378 to 4381 feet on the edge of the creek which represent the stream environment zone vegetation. It is expected that the creek is recharging the adjacent groundwater, so that groundwater surface will dip away from the creek bed and will decrease in elevation under the site.

SOIL AND GEOLOGIC CONDITIONS

Based on published information by NRCS and site observation, the native soils have been categorized as Inville gravelly coarse sandy loam, 2 to 9 percent slopes, stony, and with the hydrologic soil group A. The soil is well drained, with a saturated permeability of 2 to 6 inches per hour. According to Saucedo et al. (2005), the site is underlain by undivided glacial outwash deposits of Holocene or Pleistocene age (Plate 7).

RTGA performed geotechnical test pits in June 2021, which are included on Plates 8 through 10. Test pit TP-1 near the northeast corner of the north wing extended to 15 feet depth, the maximum depth available to the excavator. Soils were generally a yellow brown to brownish yellow silty sand to sandy clay throughout, which was only slightly darker hue at the bottom of the test pits (7.5YR 5/6) compared to soils at 2 feet depth (10YR 6/8). A lower-permeability clay layer at 11 to 13 feet depth showed weathered sand and gravel particles but did not include mottling.

TP-2 under the south wing did not encounter the lower permeability layer nor any mottling to 13 feet or Elevation 6,375 feet, the maximum depth explored. There is no sign of hydrophilic vegetation along the adjacent edge of Southwood Boulevard with a surface at Elevation 6,376 feet at this location. TP-3 at the southeast corner of the proposed building encountered mottled soil at 5 feet depth or approximately Elevation 6,379 feet, however there is no surface evidence of hydrophilic vegetation at this location which would occur if seasonal or recent past groundwater was this high.

PROPOSED EXCAVATION DEPTH

The elevations of the building basement garage relative to the site contours are shown on Plates 3 and 4. The garage floor of the eastern leg is expected to be at about Elevation 6,384 feet and maximum depth of excavations for footings are expected to be no more than 4 feet lower (6,380 feet). For the entire length of the east leg, the depth of excavation would be approximately 5 feet on the downhill edge and 10 feet on the uphill edge, but is above the grade of adjacent Southwood Drive, which varies from Elevation 6,376 to 6,380 feet ground surface along the entire eastern edge.

The northwest wing of the building at Elevation 6,380 feet as shown on the top of Plate 4 profile X1 would be approximately 23 feet to bottom of excavation at the northwest corner but is roughly 5 feet depth at the northeast corner and is at adjacent grade of Southwood Boulevard at the east corner.

The southwest wing of the building as shown on the bottom of Plate 4 profile X2 would be approximately 15 feet to bottom of excavation at the northwest corner and 5 feet depth at the southeast corner but is above the adjacent grade of Southwood Boulevard a short distance from the east corner.

A review of TRPA records indicates eight previously approved soils/hydrologic applications, within 1,200 feet of the subject site (Plate 6). Approval letters for five requests show excavation depths ranging from 6 to 12 feet (Attachment 2). Approvals for three other parcels, APN's 132- 231-05, 132-231-06, and 132-231-18 were not found during our online search. None of the parcels showed a similar depth of approved excavation, however that may reflect the maximum depth required rather than the actual limit due to high groundwater.

We recommend that the east leg of the building parallel to Southwood Boulevard can be excavated to Elevation 6,376 feet without additional exploration, where the west edge of Southwood Boulevard shows no sign of spring activity or hydrophilic vegetation within 30 feet of the building footprint. It is logical that the maximum depth of excavation for the eastern leg of the building is above water level, as Southwood Boulevard is below the foundation level.

We recommend the southeastern wing of the building under the southern undeveloped portion of the site shows no evidence of hydrophilic vegetation to Elevation 6,380 feet and test pit TP-2 has no clayey or mottled layers, therefore excavation to Elevation 6,380 feet should be approved without additional excavation.

TABLE 1: NEARBY PROJECTS AND APPROVED EXCAVATION DEPTHS

Location	*Proximity to Project Site*	*Approved TRPA Excavation Depth*	*Subsurface Exploration Method*
926 Incline Way TRPA File # 970281 APN 132-231-15	190 ft Southwest	9 Feet	Test Pit
948 Incline Way TRPA File LCAP2019-0066 APN 127-030-15	220 ft Southeast	12 Feet	Waived
930 Tahoe Boulevard TRPA File LCAP2018-0182 APN: 132-012-02	680 ft Northwest	7.5 Feet	Test pit
919 Incline Court TRPA File # LCAP2009-0209 APN: 132-232-15	725 ft Southwest	6 Feet	Test Pit
900 Tahoe Boulevard TRPA File # LCAP2019-0135 APN: 132-012-04	1,200 ft Northwest	7 Feet	Waived

We recommend the northeastern wing of the building depth of maximum past groundwater was not present in the test pit to 15 feet depth or Elevation 6,387 feet. While there are strong chroma soils in test pit TP-1, they are do not vary substantially from 2 to 15 feet, as shown on the photo in Plate 11. We do not propose that the groundwater level is at 2 feet depth based on chroma, therefore the same coloring is not indicative of past shallow groundwater at 15 feet either. Vegetation at the ground surface is dry and not hydrophilic.

Alternatively, it is possible that the site was a shallow marsh area developing high chroma soils prior to grading of Tahoe Boulevard, diversion of the creek, and the culvert crossing at the intersection. However, based on the dry vegetation that has grown up on the site over the past 50-plus years, we consider any groundwater lowering and vegetation changes due to Lakeshore Boulevard are permanent at this point and should not reflect recent activity of high groundwater level.

We request approval of a maximum excavation depth to 23 feet depth to support the garage excavation. Excavation of test pits deeper than about 15 feet depth is impractical, and soil borings would be required if more information is requested.

APPLICATION CHECKLIST

a) *Land Capability:* Class 6 based on 2008 verification.

b) *Proposed Maximum Excavation (below existing grade):* 12 feet for the east leg to Elevation 6,376 feet, 15 feet for the south wing or Elevation 6,380 feet, and 11 feet for the north wing or Elevation 6,391 feet.

c) *Explanation of methodology in selection of test pits:* No additional exploration is proposed.

d) *Volume of Spoil Material:* Approximately 7,000 cubic yards.

Temporary Spoil Storage: Hauled off site to an approved fill location.

e) *Stream Environment Zones:* The excavation described above is not in a Stream Environment Zone. The nearest possible SEZ is an unnamed shallow channel which drains to Third Creek located approximately 160 feet northeast across Tahoe Boulevard (Plate 5).

f) *Cross-Section through Proposed Excavation:* See Plate 4.

g) *Nearby Approved Parcels:* See Plate 6

h) *Statement of Need:* The proposed excavation is required to allow new construction of spread footings and parking for multiple condominium units.

i) *Photographs:* See Plates 11, 12, 13, 14, and 15.

j) *Vegetation:* Pine trees and manzanita. No hydrophilic or wetland species were observed.

k) *Soil Type*: Inville gravelly coarse sandy loam, 2 to 9 percent slopes, stony.

l) *Geologic Information:* Quaternary outwash deposits – includes Tioga and Tahoe age deposits as well as pre-Tahoe and possibly younger (Holocene) glacial deposits.

m) *Topography:* 20H:1V in proposed building area.

CLOSURE

We trust that the information provided in this report provides the necessary information to favorably review this scoping report. If you have any questions regarding this report, please contact our office.

Sincerely,

Reno Tahoe Geo Associates, Inc.

Shane Mulvaney
Senior Geologist

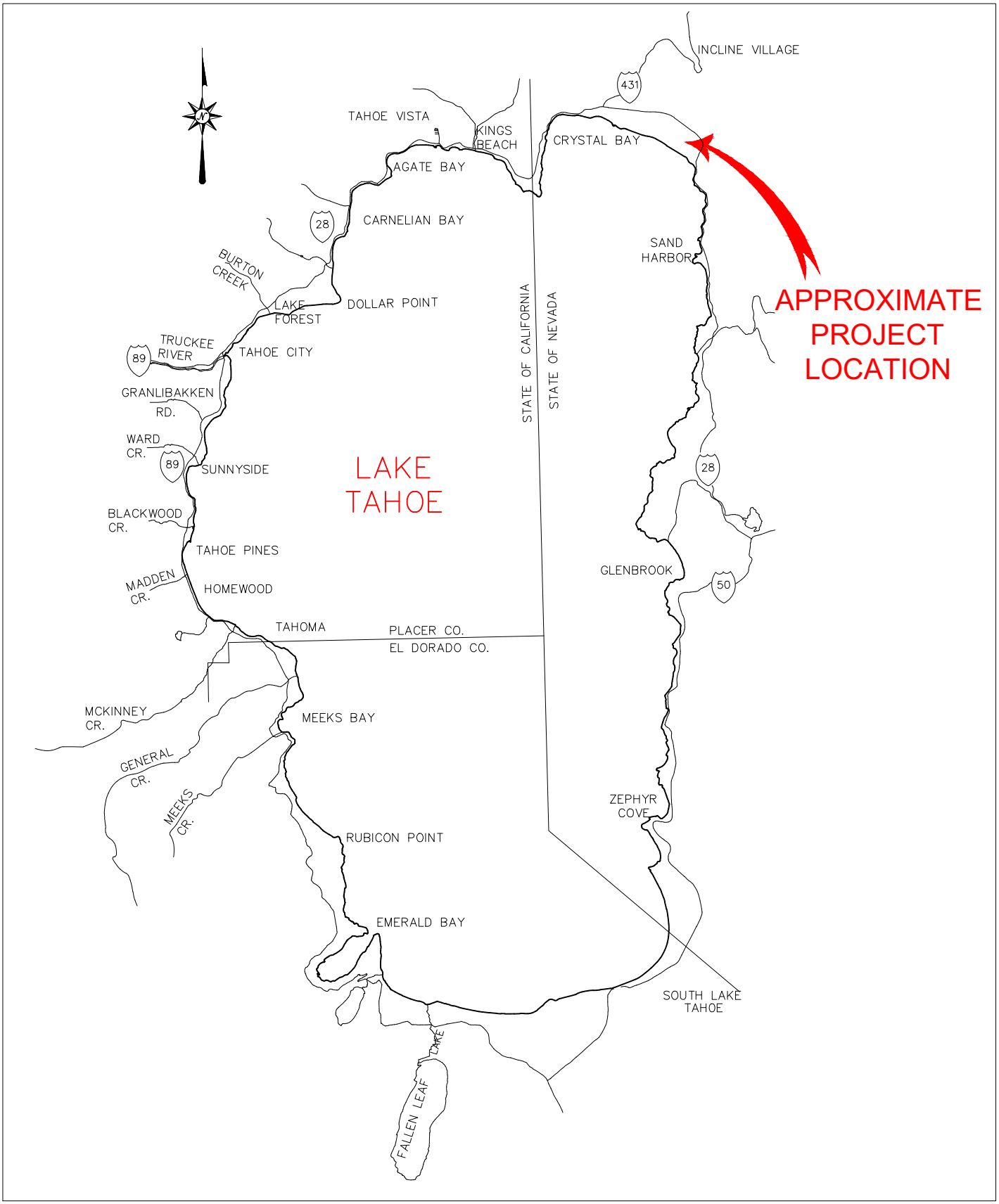
PROFESSIONAL ENGINEER-STATE OF NEVADA
JONATHAN W. PEASE
Exp: 12-2021
CIVIL
No. 16296
9-7-21

Jonathan W. Pease, Ph.D., P.E., G.E.
Civil Engineer, (NV) 16296

Plates: Plate 1 Vicinity Map
Plate 2 Site Plan
Plate 3 Basement Layout
Plate 4 Cross-Sections
Plate 5 SEZ Locations
Plate 6 Nearby Soils/Hydrologic Approvals Plate 7 Geologic Map
Plates 8–10 Logs of Test Pits
Plate 11 Photo of Test Pit TP-1
Plates 12–16 Site Photos

Attachments: TRPA Soils/Hydrologic Approval Letters for Nearby Parcels
Soils/Hydrology Scoping Report Application

PLATES



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FAX (775)853-9199

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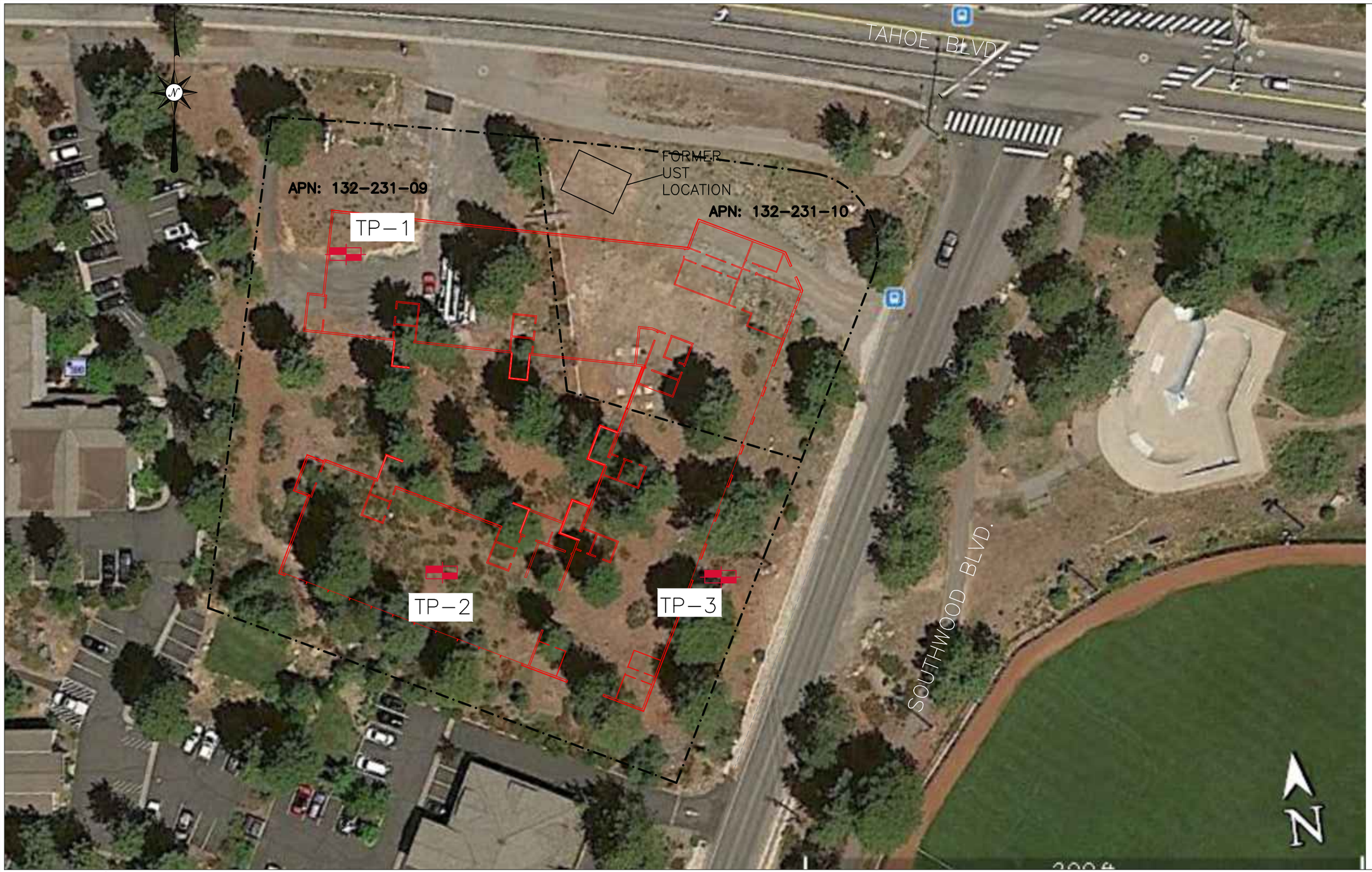
VICINITY MAP

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 1



Test Pit Location

Approximate Parcel Boundary

Approximate Building Outline

0 50 100

SCALE: 1"= 50'

Reno Tahoe Geo Associates, Inc.

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SITE MAP

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY CALIFORNIA

PLATE 2

J:\2021\21073.001 - Southwood Condos Incline Village\Drawings and Plans\Southwood Geotech Drawings.dwg 9/03/21

PROPOSED BASEMENT FLOOR ELEVATION 6384 FT
PROPOSED BOTTOM OF FOOTING 6380 FT

J:\2021\21073.001 - Southwood Condos Incline Village\Drawings and Plans\Site Cross sections Plates 3 4.dwg 9/06/21

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JOB # 21073.002 APPR: _____ DATE: 09/06/2021

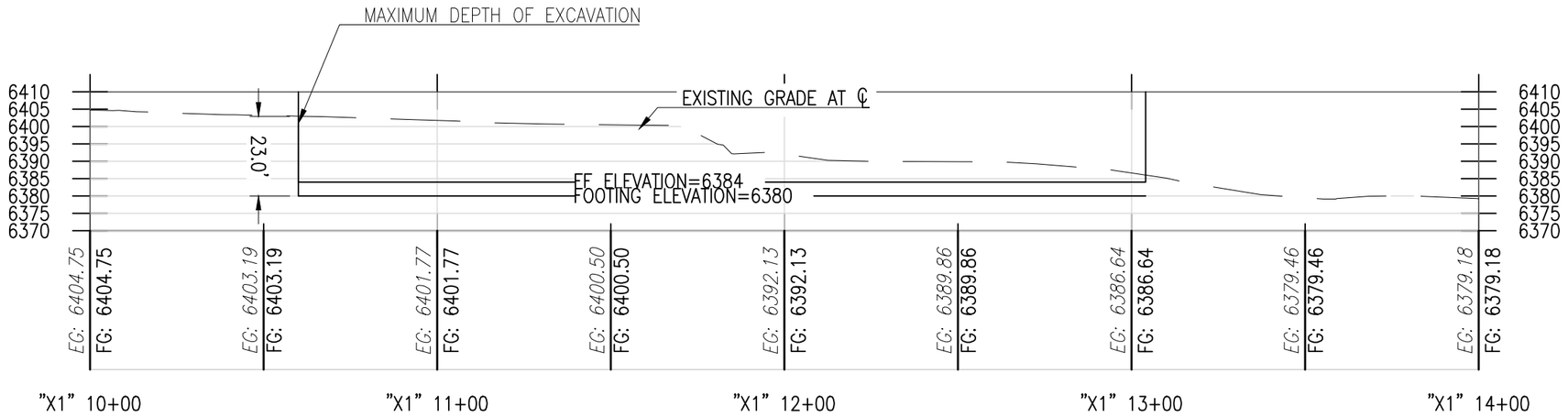
BASEMENT LAYOUT

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

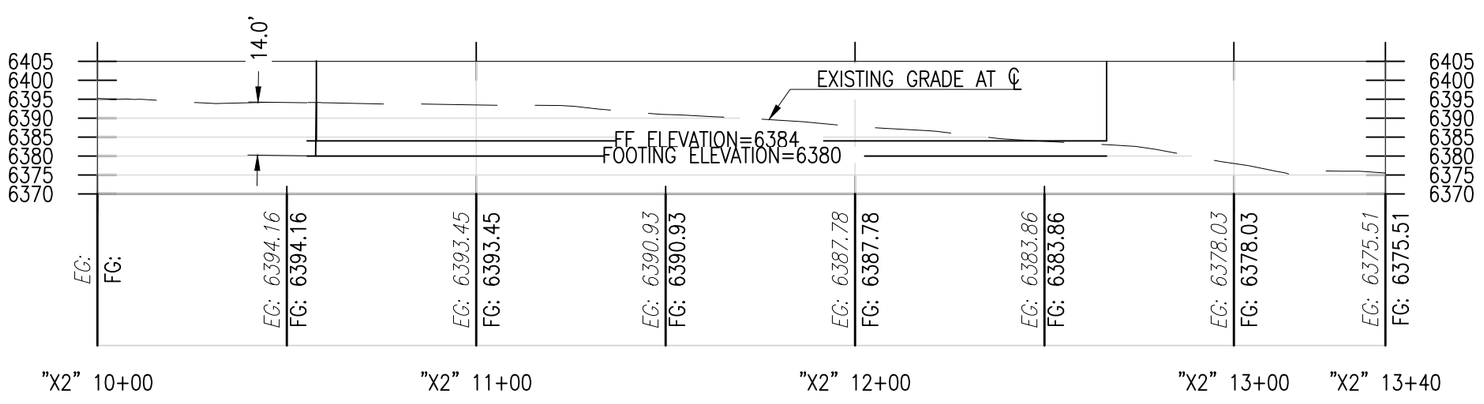
WASHOE COUNTY NEVADA

PLATE 3

X1 PROFILE



X2 PROFILE



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CROSS SECTIONS

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 4

0 100 200

SCALE: 1"= 100'

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SEZ LOCATIONS

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 5

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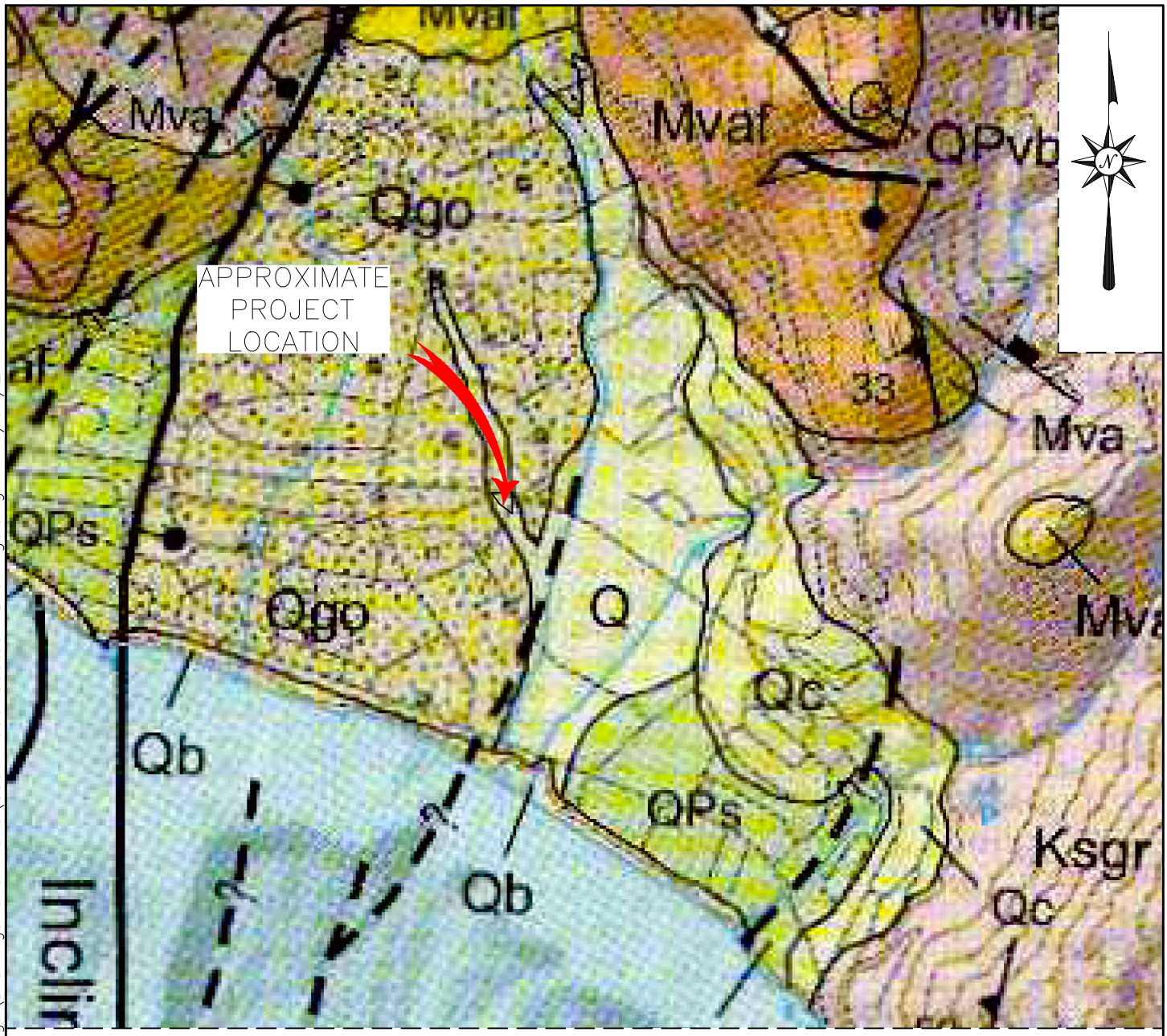
JOB # 21073.003 APPR: _____ DATE: 06/09/2021

NEARBY SOIL HYDROLOGIC APPROVALS

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE
6



Q	ALLUVIUM (HOLOCENE & PLEISTOCENE)
Qgo	OUTWASH DEPOSITS (PLEISTOCENE AND HOLOCENE?)
Qc	COLLUVIUM (HOLOCENE)
QPs	UNNAMED GRAVELS, SAND, AND ALLUVIUM (PLIOCENE AND (OR) PLEISTOCENE)

0 2000 4000

SCALE: 1"= 2,000'

REFERENCE: GEOLOGIC MAP OF THE LAKE TAHOE BASIN – CALIFORNIA AND NEVADA, 2005, PREPARED BY GEORGE J. SAUCEDO

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JOB # 21073.001 APPR: JWP DATE: 7/12/2021

GEOLOGIC MAP

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 7

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LOG OF TEST PIT TP-1

LOCATION NORTHWEST QUADRANT OF SITE

EQUIPMENT LINK-BELT 145 X 4

ELEVATION 6402.0 DATE 6/10/21

LABORATORY TESTS	FIELD BLOWS /6in	BLOWS/FT	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DEPTH (ft)	SAMPLE	
					0		**LIGHT GRAY SILTY SAND (SM)** Pine duff overlying silty sand (decomposed granite) fill. (10YR 7/1) (est.15% G/ 55% S/ 30% F)
					2		**DARK YELLOWISH BROWN SILTY SAND WITH BOULDERS AND COBBLES (SM)** Dry to slightly moist, loose, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 20% angular to subrounded cobbles and 20% subangular to subrounded boulders to 3 feet size. Abundant roots. (10YR 3/4) (est.20% G/ 60% S/ 20% F)
					4		**BROWNISH YELLOW SILTY SAND WITH BOULDERS AND COBBLES (SM)** Dry to slightly moist, loose to medium dense, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 20% angular to subrounded cobbles and 20% subangular to subrounded boulders to 6+ feet size. Abundant roots. (10YR 6/8) (est.30% G/ 50% S/ 20% F)
					6		
					8		**LIGHT GRAY** Single boulder of indeterminate size. Hard, lenticular granite mass. Difficult to excavate. (10YR 7/1)
					10		**BROWNISH YELLOW SILTY SAND WITH BOULDERS AND COBBLES (SM)** Slightly moist, loose, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 20% angular to subrounded cobbles and 20% subangular to subrounded boulders to 3 feet size. (10YR 6/8) (est.30% G/ 50% S/ 20% F)
SA, Percent Passing #200 =51% Liquid Limit = 35 Plasticity Index = 14					12		**YELLOWISH BROWN LEAN CLAY (CL)** Slightly moist to moist, fine sand in soft to firm, low plasticity clay with dark yellowish brown (10YR4/6) and olive (5YR5/5) flecks (decomposed fine gravel). (10YR 5/8)
					14		**STRONG BROWN SILTY, CLAYEY SAND (SC-SM)** Moist, loose, thin low to medium plasticity clay and non-plastic silt layers in fine to coarse sand. Fine to medium subangular to subrounded gravel. (7.5YR 5/6) (est.20% G/ 50% S/ 30% F)
					16		TERMINATED @ 15' No Free Water Observed

)

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JOB # 21073.001 APPR: DATE: 6/11/2021

LOG OF TEST PIT TP-1

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 8

1 LOG LETTER SIZE SOUTHWOOD SOILS HYDRO.GPJ MED DATA TEMPLATE 2015A.GDT 9/7/21

LOG OF TEST PIT TP-2

LOCATION SOUTHWEST QUADRANT OF SITE

EQUIPMENT LINK-BELT 145 X 4

ELEVATION 6388.0 DATE 6/10/21

LABORATORY TESTS	FIELD BLOWS /6in	BLOWS/FT	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DEPTH (ft)	SAMPLE	
					0		**DARK REDDISH BROWN SILTY SAND (SM)** Dry, loose, angular to subrounded gravel, non-plastic silt, in fine to coarse sand. Pine duff overlying topsoil. (2.5YR 3/4) (est.15% G/ 60% S/ 25% F)
					2		**DARK YELLOWISH BROWN SILTY SAND WITH COBBLES AND BOULDERS (SM)** Dry to slightly moist, loose matrix, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 25% angular to subrounded cobbles and 20% subangular to subrounded boulders to 3 feet size. Abundant roots. (10YR 4/6) (est.20% G/ 60% S/ 20% F)
					4		
					6		
					8		**YELLOWISH BROWN SILTY SAND WITH COBBLES AND BOULDERS (SM)** Dry to slightly moist, loose matrix, fine to coarse angular to subrounded gravel, non-plastic silt in fine to coarse granitic sand. 30% angular to subrounded cobbles and 5% subangular to angular boulders to 3 feet size. (10YR 5/6) (est.25% G/ 55% S/ 20% F)
					10		
					12		TERMINATED @ 13' No Free Water Observed
					14		
					16		

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JOB # 21073.001 APPR: DATE: 6/11/2021

LOG OF TEST PIT TP-2

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 9

1 LOG LETTER SIZE SOUTHWOOD SOILS HYDRO.GPJ MED DATA TEMPLATE 2015A.GDT 9/7/21

LOG OF TEST PIT TP-3

LOCATION SOUTHEAST QUADRANT OF SITE

EQUIPMENT LINK-BELT 145 X 4

ELEVATION 6384.0 DATE 6/10/21

LABORATORY TESTS	FIELD BLOWS /6in	BLOWS/FT	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DEPTH (ft)	SAMPLE	
					0		**DARK REDDISH BROWN SILTY SAND (SM)** Dry, loose, angular to subrounded gravel, non-plastic silt, in fine to coarse sand. Pine duff overlying topsoil. Scattered surficial boulders to 5 feet size. (2.5YR 3/4) (est.15% G/ 55% S/ 30% F)
					2		**DARK YELLOWISH BROWN SILTY SAND WITH COBBLES AND BOULDERS (SM)** Dry, loose, fine to coarse angular to subrounded gravel, non-plastic silt, fine to coarse granitic sand. Estimate 15% angular to subrounded cobbles. Common boulders to 3 feet size. (10YR 4/4) (est.15% G/ 65% S/ 20% F)
					4		grades yellowish brown
					6		**YELLOWISH RED SILTY SAND (SM)** Slightly moist, loose to medium dense, non-plastic silt in fine sand. Some dark yellowish brown (10YR 4/6) mottling. Minor angular to subrounded gravel. (5YR 5/8) (est.10% G/ 65% S/ 25% F)
					8		**GRAY / LIGHT OLIVE GRAY SILTY SAND (SM)** Dry, medium dense to dense, non-plastic silt in fine to coarse sand. Some angular to subangular cobbles and boulders. Excavator refusal at 9'. (5Y 6/1) (est.20% G/ 60% S/ 20% F)
					10		TERMINATED @ 9' No Free Water Observed
					12		
					14		
					16		

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JOB # 21073.001 APPR: DATE: 6/11/2021

LOG OF TEST PIT TP-3

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 10

1 LOG LETTER SIZE SOUTHWOOD SOILS HYDRO.GPJ MED DATA TEMPLATE 2015A.GDT 9/7/21

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FAX (775)853-9199

JOB # 21073.001 APPR: JWP DATE: 09/06/2021

PHOTO OF TEST PIT TP-1

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 11

Looking SE from NW Property Corner

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JOB # 21073.001 APPR: JWP DATE: 07/07/2021

SITE PHOTO

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 12

C:\Users\JONPEA~1\AppData\Local\Temp\AcPublish_14072\Southwood Geotech Drawings.dwg 9/07/21

Looking NE from Center of Property

Reno Tahoe Geo Associates, Inc.
P.O. Box 18449
Reno, Nevada 89511
CONSULTING CIVIL ENGINEERS
TEL (775)853-9100
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SITE PHOTO

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 13

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Looking SE from Center of Property

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FAX (775)853-9199

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SITE PHOTO

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 14

C:\Users\JONPEA~1\AppData\Local\Temp\AcPublish_14072\Southwood Geotech Drawings.dwg 9/07/21

Corner of Southwood and Tahoe Blvd. Looking Across Former Chevron Station Parcel

Reno Tahoe Geo Associates, Inc.

P.O. Box 18449
Reno, Nevada 89511

CONSULTING CIVIL ENGINEERS

TEL (775)853-9100
FAX (775)853-9199

JOB # 21073.001 APPR: JWP DATE: 07/07/2021

SITE PHOTO

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 15

C:\Users\JONPEA~1\AppData\Local\Temp\AcPublish_14072\Southwood Geotech Drawings.dwg 9/07/21

Looking North Along Retaining Wall, West Edge of Former Chevron Parcel

Reno Tahoe Geo Associates, Inc.

P.O. Box 18449
Reno, Nevada 89511

CONSULTING CIVIL ENGINEERS

TEL (775)853-9100
FAX (775)853-9199

JOB # 21073.001 APPR: JWP DATE: 07/07/2021

SITE PHOTO

SOIL HYDROLOGIC SCOPING REPORT
SOUTHWOOD CONDOMINIUMS
INCLINE VILLAGE

WASHOE COUNTY NEVADA

PLATE 16

C:\Users\JONPEA~1\AppData\Local\Temp\AcPublish_14072\Southwood Geotech Drawings.dwg 9/07/21

ATTACHMENTS

TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

April 23, 2019

Andrew Haney
Incline Village General Improvement District
1220 Sweetwater
Incline Village, NV 89451

SOIL HYDROLOGIC APPROVAL – WAIVER
IVGID BALLFIELD IMPROVEMENT PROJECT
948 INCLINE WAY, WASHOE COUNTY, NEVADA
APN 127-030-15, TRPA FILE NUMBER LCAP2019-0066

Dear Mr. Haney:

Tahoe Regional Planning Agency (TRPA) staff has reviewed the Soils/Hydrologic Scoping Report Application submitted in association with the Incline Village General Improvement District Ballfield Improvement project. The proposed excavation of **12 feet below ground surface** is for installation of two pole foundations for the scoreboard. Although the excavation may intercept groundwater, the excavation is allowed pursuant to TRPA Code of Ordinances Sections 33.3.6.A.2.a (accommodation of engineering requirements for above-ground structures).

Please note that it is possible that variations in the soil or groundwater conditions could exist that are different than what has been investigated or reported. Although it is not anticipated that groundwater will be encountered during the proposed fall construction time period, if conditions are found to be wetter than expected, contact TRPA to discuss options for dewatering.

Pursuant to Rule 11.2 of the TRPA Rules of Procedure, this soils/hydrological approval may be appealed within twenty-one (21) days from the time TRPA releases any final decision.

If you have any questions, please contact me by phone at (775) 589-5247 or by email at jroll@trpa.org.

Sincerely,

Julie Roll
Senior Planner

TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

June 25, 2019

Ryan Burlt Construction
1455 Deming Way #1
Sparks, NV 89431

SOIL HYDROLOGIC APPROVAL - WAIVER
900 TAHOE BOULEVARD, WASHOE COUNTY, NEVADA
APN 132-012-04, TRPA FILE NUMBER LCAP2019-0135

Dear Mr. Burlt:

The Tahoe Regional Planning Agency (TRPA) staff has reviewed the Soils/Hydrologic Scoping Report Application submitted in association with the Bank of America light fixture upgrade. The proposed excavation of 7 **feet below ground surface** is for installation of six light poles in the bank parking lot. It is not expected that groundwater will be encountered in this location and the excavation is allowed pursuant to TRPA Code of Ordinances Sections 33.3.6.A.2.a (accommodation of engineering requirements for above-ground structures) and 33.3.6.A.2.d (public health and safety).

Please note that it is possible that variations in the soil or groundwater conditions could exist that are different than what has been investigated or reported. If conditions are found to be wetter than expected, contact TRPA immediately to discuss options for dewatering.

Pursuant to Rule 11.2 of the TRPA Rules of Procedure, this soils/hydrological approval may be appealed within twenty-one (21) days from the time TRPA releases any final decision.

If you have any questions, please contact me by phone at (775) 589-5247 or by email at jroll@trpa.org.

Sincerely,

Julie Roll
Senior Planner

C. Laura Fabrizio
3328 Newbliss Cir.
Ormond Beach, FL 23174

TAHOE REGIONAL PLANNING AGENCY

128 Market Street
Stateline, Nevada
www.trpa.org

P.O. Box 5310
Stateline, Nevada 89449

(775) 588-4547
Fax (775) 588-4527
Email: trpa@trpa.org

September 17, 2009

Huldrege & Kull
Pam Raynak
10775 Pioneer Trail #213
Truckee, CA 96161

RE: SOIL HYDROLOGIC APPROVAL
INCLINE BUSINESS PARK LLC, 919 INCLINE CT., WASHOE COUNTY
APN 132-232-15, TRPA FILE NUMBER LCAP2009-0209

Dear Ms. Raynak:

The Tahoe Regional Planning Agency (TRPA) staff's Land Capability Program has reviewed the Soils/Hydrologic Scoping Report Application submitted September 2, 2009. Upon reviewing the application and site visit to observe a test pit, **TRPA staff hereby approves the excavation for an infiltrating BMP to 6 feet below ground surface.**

Please note that it is possible that variations in the soil or groundwater conditions could exist at the site that are different than what has been investigated or reported. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, snowfall, temperature, regional water usage, or other factors. These variations and/or changes could cause the groundwater level to be higher than interpreted. ***Because of this, the applicant is required to notify the TRPA immediately if significantly different subsurface conditions are encountered than what has been interpreted from the investigation.***

This letter only approves the depth of the excavation and does not represent approval for the project.
The TRPA has the following recommendations for the project:

1. Temporary Best Management Practices (BMPs) are to be installed and maintained prior to excavation and during all phases of the proposed project.
2. All excavated materials shall be hauled away from the site to a legally acceptable location. No fills or recontouring, other than backfill for the cut-retaining structures, shall be allowed.
3. Blasting of rocks should be kept to an absolute minimum to avoid damage to surrounding rocks and vegetation.

Pursuant to Rule 11.2 of the TRPA Rules of Procedure, this soils/hydrological approval may be appealed within twenty-one (21) days from the time TRPA releases any final decision. Thank you for your cooperation. Should you have any questions about these matters, please contact this office at (775) 589-5313.

Sincerely,

Heather Gustafson
Senior Planner / Land Capability Program Manager
Environmental Review Services
Tahoe Regional Planning Agency

TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449 5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775 588 4547
Fax: 775 588 4527
www.trpa.org

July 23, 2018

Kevin Provance
Black & Veatch
5885 Meadows Rd, Ste. 700
Lake Oswego, OR 97035

SOIL HYDROLOGIC INVESTIGATION - APPROVAL
930 TAHOE BOULEVARD, WASHOE COUNTY, NEVADA
APN: 132-012-02 TRPA FILE NUMBER LCAP2018-0182

Dear Mr. Provance:

Tahoe Regional Planning Agency (TRPA) staff reviewed the Soils/Hydrologic Report Application submitted June 26, 2018. Field conditions were evaluated onsite by TRPA contractor Phil Scoles on July 17, 2018 (exposed excavation on this date). The soil thickness is greater than 7 feet deep. No evidence of ground water (i.e. iron staining, gray soil, etc.) was observed; however, the decaying stones and boulders contain oxidized iron deposits. Such deposits are not evidence of a seasonal water table – they are a product of the natural breakdown of the rock mineralogy. There are also several soil/hydrologic investigations that occurred nearby that also lacked groundwater in the upper 9 feet (or deeper). Based on the field investigation, TRPA staff hereby approves an excavation of 7.5 feet below ground surface for the proposed retaining wall parallel to the east property line (behind the Tesla Supercharging Station currently under construction).

Please note that it is possible that variations in the soil or groundwater conditions could exist at the site that are different than what has been investigated or reported. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, snowfall, temperature, regional water usage, or other factors. These variations and/or changes could cause the groundwater level to be higher than interpreted. ***Because of this, the applicant is required to notify the TRPA immediately if significantly different subsurface conditions are encountered than what has been interpreted from the investigation.***

This letter only approves the depth of the excavation and does not represent approval for the project. TRPA has the following recommendations for the project:

1. Temporary Best Management Practices (BMPs) are to be installed and maintained prior to excavation and during all phases of the proposed project.

2. All excavated materials shall be hauled away from the site to a legally acceptable location. No fills or recontouring, other than backfill for the cut-retaining structures, is allowed.

3. Blasting of rocks should be kept to an absolute minimum to avoid damage to surrounding rocks and vegetation.

Pursuant to Rule 11.2 of the TRPA Rules of Procedure, this soils/hydrological approval may be appealed within twenty-one (21) days from the time TRPA releases any final decision (**August 13, 2018**).

If you have any questions, please contact me by phone at (775) 589-5249 or by email at jroll@trpa.org.

Sincerely,

Julie Roll
Senior Planner
Current Planning Department

Cc: Andrew Levy
Tesla Motors, Inc.
3500 Deer Creek Road
Palo Alto, CA 94304

Joel Korotkin
6029 Monet Way
El Dorado Hills, CA 95762

TAHOE REGIONAL PLANNING AGENCY

308 Dorla Court
Elks Point, Nevada

P.O. Box 1038
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Email: trpa@sierra.net

June 3, 1997

MR PAUL KALETA
BASIN STRATEGIES
POST OFFICE BOX 11945
ZEPHYR COVE NEVADA 89448

Dear Mr. Kaleta:

APPROVAL OF EXCAVATION FOR PROPOSED PROJECT BASED ON COMPLETED INVESTIGATION, EDUCATIONAL FIELD STUDIES OFFICE, 926 INCLINE WAY, WASHOE COUNTY, APN 132-231-15, TRPA FILE #970281

The Tahoe Regional Planning Agency (TRPA) staff's Ground Water Technical Advisory Committee (GWTAC) has reviewed the final report, dated May 30, 1997, that was prepared by Darlene Barlow of Nortech. The GWTAC hereby approves the final report and agrees with the conclusions that no evidence was found to show that the proposed excavation to a total depth of 9.0 feet below ground surface (bgs) would intercept the highest recorded groundwater levels.

No groundwater, mottled, gleyed, or reduced areas in the soil profile were observed in the soil test pits to indicate seasonal groundwater levels. The GWTAC approves the depth of the proposed excavation to not exceed 9.0 feet bgs for the project.

Please note that it is possible that variations in the soil or groundwater conditions could exist at the site that are different than what has been investigated or interpreted. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, snowfall, temperature, regional water usage, or other factors. These variations and/or changes could cause the groundwater level to be higher than interpreted. Because of this, the applicant is required to have a TRPA GWTAC member inspect the completed excavation to verify that it does not intercept existing or historic groundwater levels.

This letter only approves the depth of the excavation and does not represent approval for the project. A copy of this letter has been forwarded to the appropriate project reviewing department for inclusion in the project file. The project reviewing department will review the project for conformance with other applicable ordinances to determine if a conditional permit can be issued and will use this letter as an approval of the depth of the excavation only.

The TRPA GWTAC has the following recommendations for the project:

1. All excavated materials shall be hauled away from the site to a legally acceptable location. No fills, or recontouring, other than backfills for the cut-retaining structures, shall be allowed.

2. The excavation for the project shall be visually inspected by a TRPA GWTAC member to verify that the excavation is above the highest recorded existing or seasonal groundwater level. If groundwater is intercepted, then the excavation and foundation design shall be immediately revised to not intercept groundwater. The revised depth shall be subject to approval by the GWTAC.

Thank you for your cooperation. Should you have any questions about these matters, please contact this office at (702) 588-4547.

Sincerely,

Douglas F. Smith
TRPA GWTAC Lead Geologist
California Registered Geologist No. 6540

Joseph Pepi
TRPA GWTAC Lead Soil Scientist
Certified Professional Soil Scientist, No. 2372

DFS/jsd

c: Ms. Darlene Barlow, PE, NORTECH, 390 Freeport Blvd. #12, Sparks NV 89431
Bear Ridge Developers, Inc., PO Box 7097, Incline Village NV 89452-7097
Paul Pettersen, TRPA Senior Planner

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