



City of Ketchum

October 17th, 2022

Mayor Bradshaw and City Councilors
City of Ketchum
Ketchum, Idaho

Mayor Bradshaw and City Councilors:

Recommendation to Approve the 1st & Sun Valley Office Building Right-of-Way Encroachment Agreement 22806

Recommendation and Summary

Staff recommends the Ketchum City Council approve the attached Right-of-Way Encroachment Agreement 22806 and adopt the following motion:

“I move to authorize the Mayor to sign Right-of-Way Encroachment Agreement 22806 with 131 E Sun Valley Road LLC.”

The reasons for the recommendation are as follows:

- The improvements will not impact the use or operation of the street or decrease the number of on-street parking spaces along 1st Avenue or Sun Valley Road.
- The improvements will not impact drainage or snow removal within the public right-of-way.
- The project complies with all standards for Right-of-Way Encroachment Permit issuance specified in Ketchum Municipal Code §12.12.060.
- The proposed snowmelt system meets the City’s energy code and installation for commercial projects.
- The property owner is responsible for the installation, maintenance, and repair of the right-of-way encroachments, including the snowmelt system installed for the public sidewalks.

Introduction and History

The 1st & Sun Valley Office Building project proposes to develop a new three-story commercial office building at the northeast corner of 1st Avenue and Sun Valley Road within the Mixed-Use Subdistrict of the Community Core (CC-2 Zone). The office building is proposed to be subdivided into 5 condominium units for business tenants. The Planning and Zoning Commission approved the 1st & Sun Valley Office Building Design Review P21-100 and recommended approval of the Condominium Subdivision Preliminary Plat P22-019 to the Ketchum City Council on May 24th, 2022. The Ketchum City Council approved the Condominium Subdivision Preliminary Plat applications on July 5th, 2022.

The applicant has submitted a building permit for the project. The plans for the 1st & Sun Valley Road Office Building approved by the Planning and Zoning Commission with Design Review Permit P21-100 proposed encroachments within the public right-of-way, including new 8-foot-wide heated paver sidewalks along 1st Avenue and Sun Valley Road and a canopy overhang extending 2 feet into the right-of-way along Sun Valley Road. Pursuant to Condition of Approval No. 4 of Design Review P21-100, the

City Council must review and approve the proposed encroachments within the public right-of-way prior to issuance of a building permit for the project.

Analysis

Pursuant to Ketchum Municipal Code §12.12.040.C, a Right-of-Way Encroachment Permit is required for any permanent encroachment within the public right-of-way where a permanent fixture in the ground or attached to a building will occur. The standards for issuance of a Right-of-Way Encroachment Permit are specified in Ketchum Municipal Code §12.12.060. The City Council has the authority to review and approve all permanent encroachments within the public right-of-way associated with a development project pursuant to Ketchum Municipal Code §17.96.030.C. The associated Right-of-Way Encroachment Agreement is intended to help protect the City in the event the proposed encroachments were to ever pose an issue requiring repair, relocation, or removal of the encroachment. The agreement also obligates the property owner to install, maintain, and repair the permanent encroachments, including the snowmelt system for the public sidewalks.

The project requires a Right-of-Way Encroachment Permit for the new heated paver sidewalks proposed to be installed along 1st Avenue and Sun Valley Road as well as a canopy overhang attached to the main level of the office building that extends 2 feet into the public right-of-way along Sun Valley Road. The encroachments proposed for the 1st & Sun Valley Office Building project comply with all standards for permanent right-of-way encroachments specified in Ketchum Municipal Code §12.12.060. Permanent encroachments within the right-of-way must be in the public interest pursuant to Ketchum Municipal Code §12.12.060.A. The permanent encroachments proposed for the 1st & Sun Valley Office Building are in the public interest because: (1) the snowmelt system will prevent the accumulation of snow and ice on the sidewalks along 1st Avenue and Sun Valley Road and will provide the public benefit of maintaining safe pedestrian access during winter and (2) the canopy overhang along Sun Valley Road will provide weather protection for pedestrians and people entering and exiting the office building.

Sustainability

The ROW Encroachment Permit does not limit the ability of the city to reach the goals of the Ketchum Sustainability Action Plan – 2020. The proposed snowmelt system meets the City's energy code and installation requirements for commercial projects.

Financial Impact

There is no financial requirement from the city for this action at this time.

Attachments

ROW Encroachment Agreement 22806

WHEN RECORDED, PLEASE RETURN TO:

**OFFICE OF THE CITY CLERK
CITY OF KETCHUM
POST OFFICE BOX 2315
KETCHUM, IDAHO 83340**

RIGHT-OF-WAY ENCROACHMENT AGREEMENT 22806

THIS AGREEMENT, made and entered into this ____ day of ____, 2022, by and between the CITY OF KETCHUM, IDAHO, a municipal corporation ("Ketchum"), whose address is Post Office Box 2315, Ketchum, Idaho 83340, and REID SANBORN, representing 131 E Sun Valley Road LLC, (collectively referred to as "Owner"), whose address is Post Office Box 5023, Ketchum, Idaho 83340.

RECITALS

WHEREAS, Owner is the owner of real property described as 131 E Sun Valley Road ("Subject Property"), located within the City of Ketchum, State of Idaho; and

WHEREAS, Owner wishes to permit the placement of a hydronic snowmelt system and pavers that are required for the development of the 1st & Sun Valley Office Building project within the public rights-of-way along Sun Valley Road and 1st Avenue and a canopy overhang extending within the public right-of-way along Sun Valley Road. These improvements are shown in Exhibit "A" attached hereto and incorporated herein (collectively referred to as the "Improvements"); and,

WHEREAS, Ketchum finds that said Improvements will not impede the use of said public right-of-way at this time subject to the terms and provisions of this Agreement;

WHEREAS, the Owner will restore the sidewalk, street, curb and gutter and any landscaping back to the original condition acceptable to the Streets and Facilities Director;

NOW, THEREFORE, in contemplation of the above stated facts and objectives, it is hereby agreed as follows:

TERMS AND CONDITIONS

1. Ketchum shall permit Owner to install a hydronic snowmelt system, pavers, and a canopy overhang identified in Exhibit "A" within the public rights-of-way on Sun Valley Road and 1st Avenue until notified by Ketchum to remove the infrastructure at which time Owner shall remove infrastructure at Owner's expense.

2. Owner shall be responsible for the maintenance of said Improvements and shall repair said improvements within 48 hours upon notice from Ketchum that repairs are needed. Any modification to the improvements identified in Exhibit "A" shall be approved by the City of Ketchum prior to any modifications taking place.

3. Snowmelt systems installed in the public right-of-way shall be installed and operate at all times during the winter according to the following:

- The system shall meet the requirements of the International Energy Conservation Code (2018 IECC, 403.12.2)
- The system shall have an electronic main control board to operate the system that is programmable and optimizes the way the system functions.
- Installation of in-ground control sensors linked to the main control board that detect snow and ice on the surface, monitor the sidewalk or driveway temperature, and automatically activates the system to be turned on or off based on the snow condition and air temperature.

4. Owner shall be responsible for restoring the sidewalk, curb and gutter and landscaping that is altered due to the construction and installation of the Improvements, to the satisfaction of the Director of Streets and Facilities.

5. In consideration of Ketchum allowing Owner to maintain the Improvements in the public right-of-way, Owner agrees to indemnify and hold harmless Ketchum from and against any and all claims of liability for any injury or damage to any person or property arising from the Improvements constructed, installed and maintained in the public right-of-way. Owner shall further indemnify and hold Ketchum harmless from and against any and all claims arising from any breach or default in the performance of any obligation on Owner's part to be performed under this Agreement, or arising from any negligence of Owner or Owner's agents, contractors or employees and from and against all costs, attorney's fees, expenses and liabilities incurred in the defense of any such action or proceeding brought thereon. In the event any action or proceeding is brought against Ketchum by reason of such claim, Owner, upon notice from Ketchum, shall defend Ketchum at Owner's expense by counsel satisfactory to Ketchum. Owner, as a material part of the consideration to Ketchum, hereby assumes all risk of damages to property or injury to persons in, upon or about the Improvements constructed, installed and maintained in the public right-of-way arising from the construction, installation and maintenance of said Improvements and Owner hereby waives all claims in respect thereof against Ketchum.

6. Ketchum shall not be liable for injury to Owner's business or loss of income therefrom or for damage which may be sustained by the person, goods, wares, merchandise or property of Owner, its tenants, employees, invitees, customers, agents or contractors or any other person in or about the Subject Property caused by or resulting from the Improvements constructed, installed, removed or maintained in the public right-of-way.

7. Owner understands and agrees that by maintaining the Improvements in the public right-of-way pursuant to this Agreement, Owner obtains no claim or interest in said public right-of-way which is adverse to that of Ketchum and that Owner obtains no exclusive right to said public right-of-way nor any other right to use the public right-of-way not specifically described herein.

8. In the event either party hereto retains an attorney to enforce any of the rights, duties and obligations arising out of this Agreement, the prevailing party shall be entitled to recover from the non-prevailing party reasonable attorney's fees at the trial and appellate levels and, whether or not litigation is actually instituted.

9. This Agreement shall be governed by, construed, and enforced in accordance with the laws and decisions of the State of Idaho. Venue shall be in the District Court of the fifth Judicial District of the State of Idaho.

10. This Agreement sets forth the entire understanding of the parties hereto and shall not be changed or terminated orally. It is understood and agreed by the parties hereto that there are no verbal promises or implied promises, agreements, stipulations or other representations of any kind or character pertaining to the Improvements maintained in the public right-of-way other than as set forth in this Agreement.

11. No presumption shall exist in favor of or against any party to this Agreement as the result of the drafting and preparation of this document.

12. This Agreement shall be recorded with the Blaine County Recorder by Ketchum.

13. The parties fully understand all of the provisions of this Agreement, and believe them to be fair, just, adequate, and reasonable, and accordingly accept the provisions of this Agreement freely and voluntarily.

OWNER:

CITY OF KETCHUM:

By: 131 E Sun Valley Road LLC

By: _____
Neil Bradshaw
Its: Mayor

Reid Sanborn
Its: Manager

STATE OF _____,)
) ss.
County of _____)

On this ____ day of _____, 2022, before me, the undersigned Notary Public in and for said State, personally appeared Reid Sanborn, known to me to be the Manager of 131 E Sun Valley Road LLC and person who executed the foregoing instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Notary Public for _____
Residing at _____
Commission expires _____

STATE OF IDAHO)
) ss.
County of Blaine)

On this ____ day of _____, 2022, before me, the undersigned Notary Public in and for said State, personally appeared NEIL BRADSHAW, known or identified to me to be the Mayor of the CITY OF KETCHUM, IDAHO, and the person who executed the foregoing instrument on behalf of said municipal corporation and acknowledged to me that said municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year in this certificate first above written.

Notary Public for _____
Residing at _____
Commission expires _____

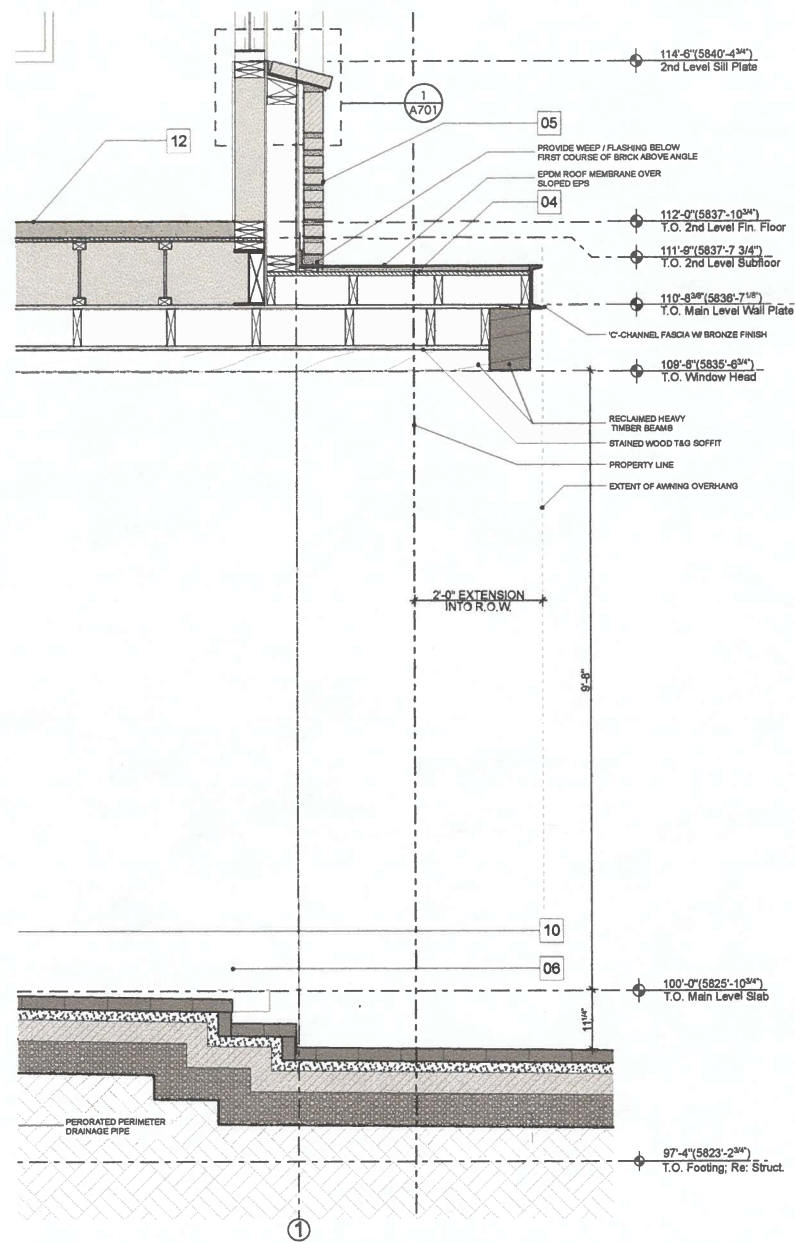
EXHIBIT "A"



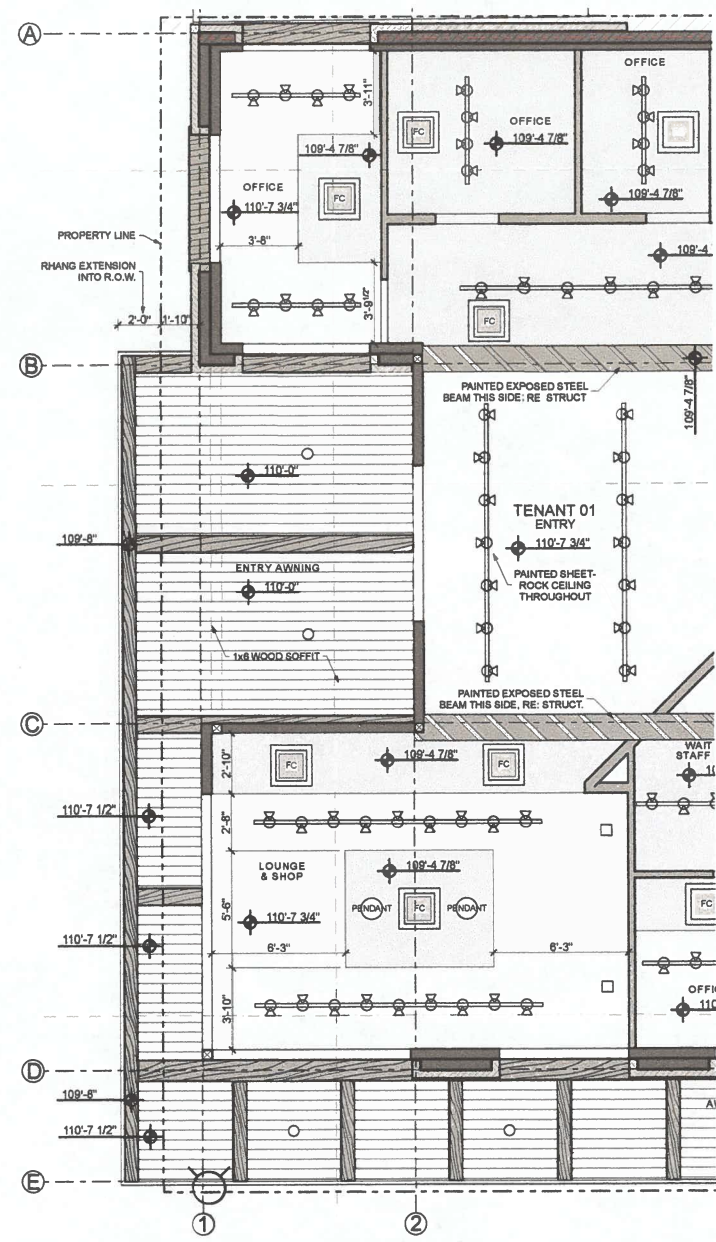
BRONZE C-CHANNEL FASCIA



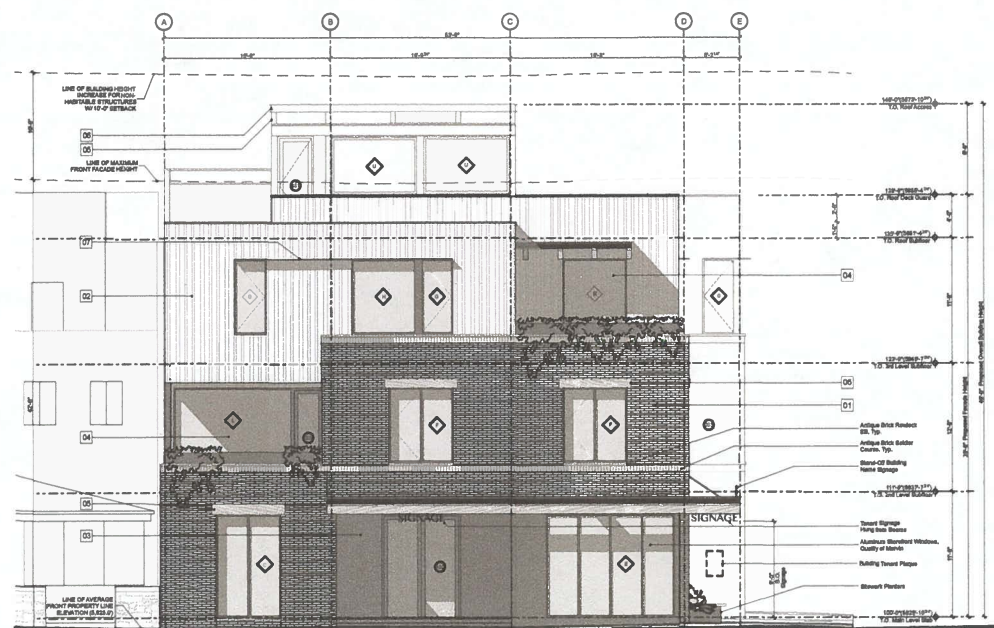
ANTIQUHE HEAVY TIMBER & T&G WOOD SOFFIT



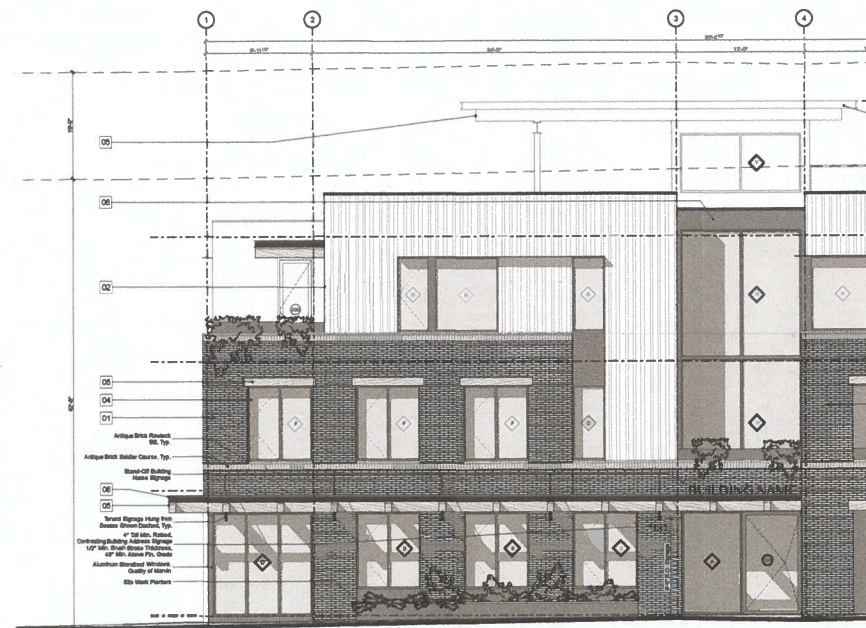
DETAILED AWNING WALL SECTION 3/4" = 1'-0"



MAIN LEVEL AWNING RCP 1/4" = 1'-0"



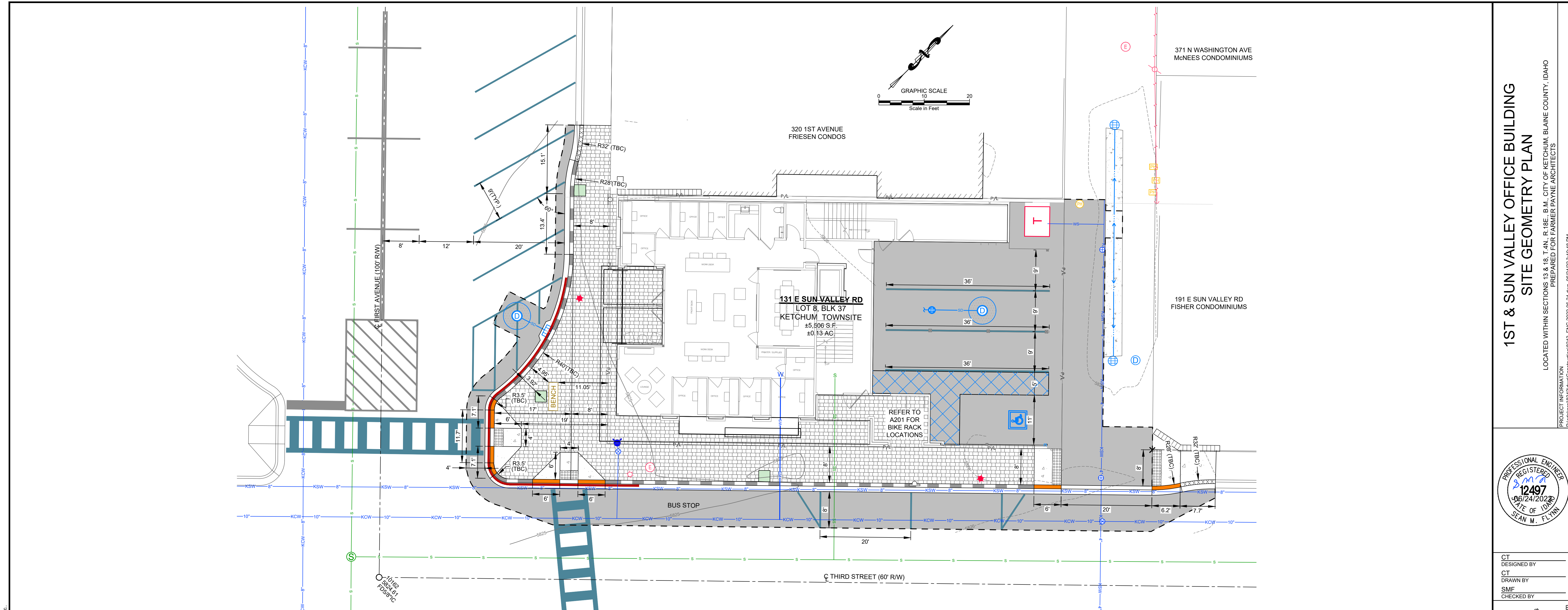
WEST BUILDING ELEVATION 1/8" = 1'-0"



SOUTH BUILDING ELEVATION 1/8" = 1'-0"

- ELEVATION KEY NOTES
- 01 Lightly Embedded Antique Brick Panels in Raining Steel with Tumbled Grout
 - 02 1/2" x 1/2" large quarry cut granite counter panels with recessed sand and heavy red mastic with mastic for grout.
 - 03 20 ga. Multi-Ply Gypsum Board (Type X) with 1/2" Drywall Paper
 - 04 20 ga. Blackened Metal Panels
 - 05 Thermally Broken Aluminum Window / Door, Typ. Quality of Glass: Low-E or Clear
 - 06 Reclaimed Heavy Timber, Typ
 - 07 Single-Ply Class IV Rubber EPDM Roof
 - 08 Blackened Metal Bar This is Access
 - 09 20 ga. Combed Steel, Quality of Steel: A36
- Verify All Finishes w/ Architect

This drawing and design is the property of Farmer Payne Architects, LLC. They are submitted on the condition that they are not to be used, reproduced, or copied, in whole or part, or used for furnishing information to others, without prior written consent of Farmer Payne Architects, LLC. All common law rights of copyright & otherwise are hereby specifically reserved.



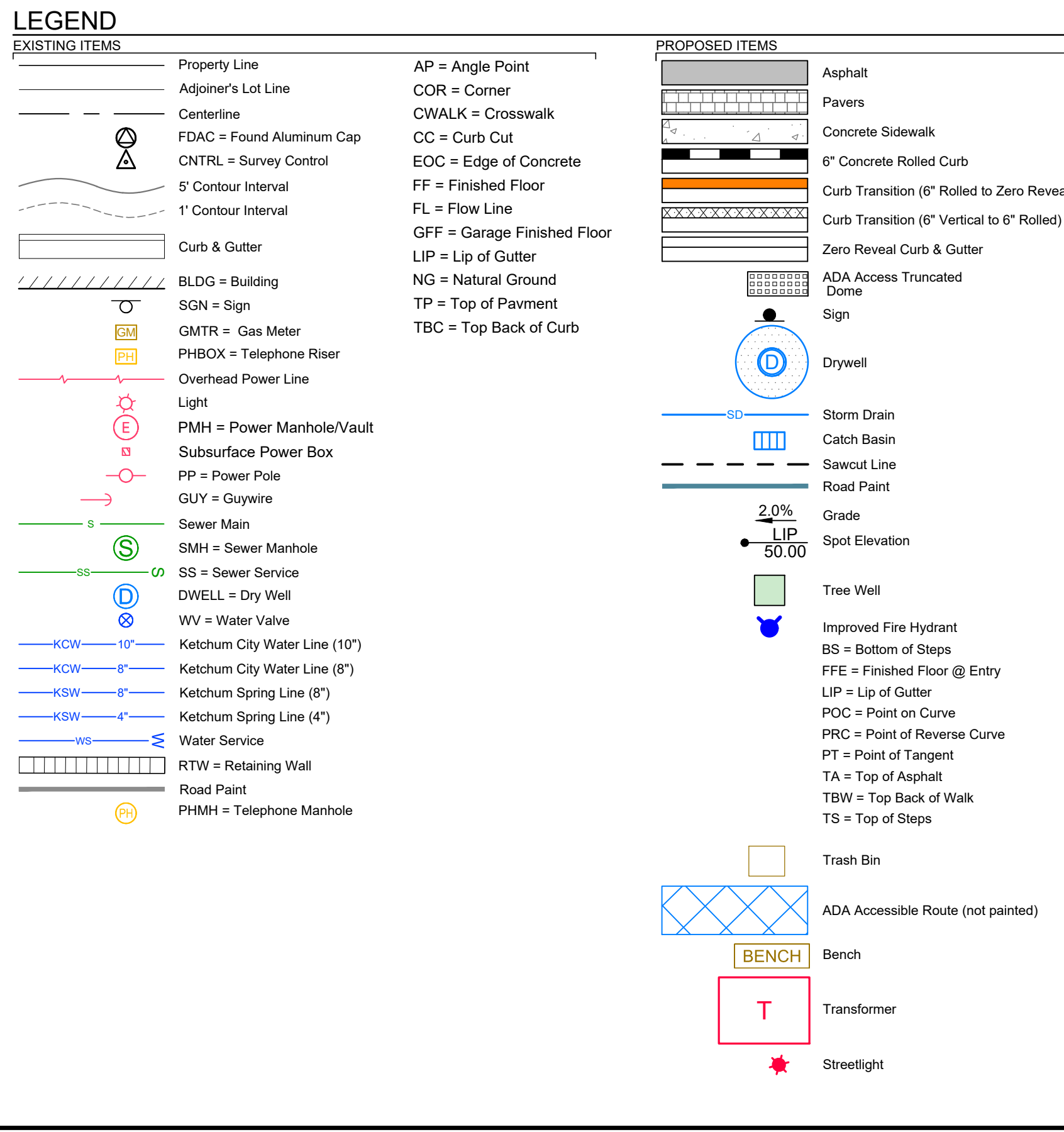
- ### CONSTRUCTION NOTES
- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT EDITION OF THE "IDAHO REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS." THE CURRENT EDITION OF THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION" (ISPCW), AND CITY OF KETCHUM STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND KEEPING A COPY OF THE ISPCW ON SITE DURING CONSTRUCTION.
 - THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS IN AN APPROXIMATE WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES PRIOR TO COMMENCING AND DURING THE CONSTRUCTION. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH RESULT FROM HIS FAILURE TO ACCURATELY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL CALL DIGLINE (1-800-342-1585) TO LOCATE ALL EXISTING UNDERGROUND UTILITIES.
 - THE CONTRACTOR SHALL CLEAN UP THE SITE AFTER CONSTRUCTION SO THAT IT IS IN A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, EPA'S NPDES CONSTRUCTION GENERAL PERMIT.
 - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
 - CONSTRUCTION OF WATER MAINS AND ALL OTHER RELATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPCW), IDAPA 58.01.08, IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS AND THE CITY OF KETCHUM UTILITIES DEPARTMENT STANDARDS.
 - CONTRACTOR SHALL PRESSURE TEST, DISINFECT, AND CONDUCT BIOLOGICAL TESTING IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPCW), AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, AND THE PRESSURE TESTING, DISINFECTION, AND MICROBIOLOGICAL TESTING PROCEDURES.
 - ALL WATER SUPPLY FIXTURES, FITTINGS, PIPING, AND ALL RELATED APPURTENANCES SHALL BE ANSINSF STD. 61 COMPLIANT.
 - ALL WATER SUPPLY FIXTURES, FITTINGS, PIPING, AND ALL RELATED APPURTENANCES SHALL COMPLY WITH THE LOW LEAD ACT REQUIRING ALL MATERIALS TO HAVE A LEAD CONTENT EQUAL TO OR LESS THAN 0.25%.
 - THE CONTRACTOR SHALL USE ANSINSF STANDARD 60 CHEMICALS AND COMPOUNDS DURING INSTALLATION & DISINFECTION OF POTABLE WATER MAIN.
 - CONTRACTOR SHALL COORDINATE LOCATIONS OF DRY UTILITY FACILITIES (POWER, CABLE, PHONE, TV) NOT SHOWN ON THE DRAWING WITH IDAHO POWER.
 - ALL CLEARING & GRUBBING SHALL CONFORM TO ISPCW SECTION 201.
 - ALL EXCAVATION & EMBANKMENT SHALL CONFORM TO ISPCW SECTION 202. EXCAVATED SUBGRADE SHALL BE COMPACTED AND ALL UNSUITABLE SECTIONS REMOVED AND REPLACED WITH STRUCTURAL FILL AS DETERMINED BY THE ENGINEER. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 95% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99 OR ITS T-91.
 - ALL 2" MINUS GRAVEL SHALL CONFORM TO ISPCW 802, TYPE II (ITD STANDARD 703.04. 2"), SHALL BE PLACED IN CONFORMANCE WITH ISPCW SECTION 801 AND COMPACTED PER SECTION 202. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 90% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99.
 - ALL 3/4" MINUS CRUSHED GRAVEL SHALL CONFORM TO ISPCW 802, TYPE I (ITD STANDARD 703.04. 3/4" B), SHALL BE PLACED IN CONFORMANCE WITH ISPCW SECTION 802 AND COMPACTED PER SECTION 202. MINIMUM COMPACTION OF PLACED MATERIAL SHALL BE 95% OF MAXIMUM LABORATORY DENSITY AS DETERMINED BY AASHTO T-99 OR ITS T-91.
 - ALL ASPHALTIC CONCRETE PAVEMENT WORK SHALL CONFORM TO ISPCW SECTION(S) 805, 810, AND 811 FOR CLASS II PAVEMENT. ASPHALT AGGREGATE SHALL BE 1/2" (13MM) NOMINAL SIZE CONFORMING TO TABLE B03B IN ISPCW SECTION 803. ASPHALT BINDER SHALL BE PG 58-28 CONFORMING TO TABLE A-1 IN ISPCW SECTION 805.
 - ALL EDGES OF EXISTING ASPHALT PAVING SHALL BE SAW CUT 24" TO PROVIDE A CLEAN PAVEMENT EDGE FOR MATCHING. NO WHEEL CUTTING SHALL BE ALLOWED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL PER THE CURRENT EDITION OF THE US DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - ALL CONCRETE FORM WORK SHALL SHALL CONFORM TO ISPCW SECTION 701 AND 703. ALL CONCRETE SHALL BE 3,000 PSI MINIMUM, 28 DAY, AS DEFINED IN ISPCW SECTION 703, TABLE 1.C.
 - ALL TRENCHING SHALL CONFORM TO ISPCW STANDARD DRAWING SD-301. TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
 - TOPOGRAPHIC, SITE, AND BOUNDARY SURVEYS SHOWN HEREON WERE CONDUCTED BY GALENA ENGINEERING, 02/12/07. LOCATIONS OF WATER AND SEWER MAINS AND SERVICES SHOWN HEREON ARE PER THE OFFICIAL WATER AND SEWER SYSTEM MAPS PROVIDED BY THE CITY OF KETCHUM.
 - PER IDAHO CODE § 55-1613, THE CONTRACTOR SHALL RETAIN AND PROTECT ALL MONUMENTS, ACCESSORIES TO CORNERS, BENCHMARKS AND POINTS SET IN CONTROL SURVEYS; ALL MONUMENTS, ACCESSORIES TO CORNERS, BENCHMARKS AND POINTS SET IN CONTROL SURVEYS THAT ARE LOST OR DISTURBED BY CONSTRUCTION SHALL BE REESTABLISHED AND RE-MONUMENTED, AT THE EXPENSE OF THE AGENCY OR PERSON CAUSING THEIR LOSS OR DISTURBANCE AT THEIR ORIGINAL LOCATION OR BY SETTING OF A WITNESS CORNER OR REFERENCE POINT OR A REPLACEMENT BENCHMARK OR CONTROL POINT, BY OR UNDER THE DIRECTION OF A PROFESSIONAL LAND SURVEYOR.

City of Ketchum Snowmelt Requirements for Commercial Projects

Snowmelt systems installed in the public right-of-way shall be installed and operate at all times during the winter according to the following:

- The system shall meet the requirements of the International Energy Conservation Code (2018 IECC, 403.12.2)
- The system shall have an electronic main control board to operate the system that is programmable and optimizes the way the system functions.
- Installation of in-ground control sensors linked to the main control board that detect snow and ice on the surface, monitor the sidewalk or driveway temperature, and automatically activates the system to be turned on or off based on the snow condition and air temperature.

All pavers to be snowmelted; refer to sheet M301 for more info & verify final snowmelt locations with G.C. & Architect.



1ST & SUN VALLEY OFFICE BUILDING
SITE GEOMETRY PLAN

LOCATED WITHIN SECTIONS 13 & 18, T.4N., R.18E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO
 PREPARED FOR FARMER PAYNE ARCHITECTS

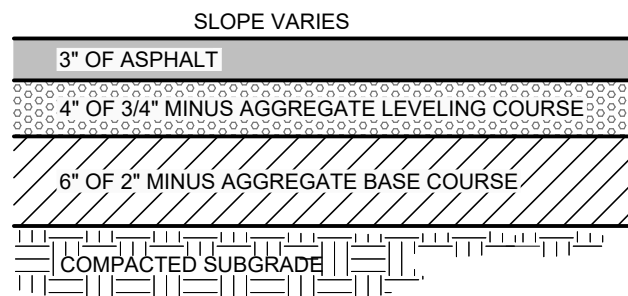
PROJECT INFORMATION
 P:\users\jrg\2022\1st&SunValley\Construction\1842_ENG_2022-08-24.dwg 08/24/22 3:18:48 PM

GALENA ENGINEERING, INC.
 Civil Engineers & Land Surveyors
 317 N. River Street
 Hailey, Idaho 83433
 (208) 788-1705
 email: galena@galena-engineering.com

PROFESSIONAL ENGINEER
 12497
 06/24/2022
 STATE OF IDAHO
 SEAN M. FLYNN

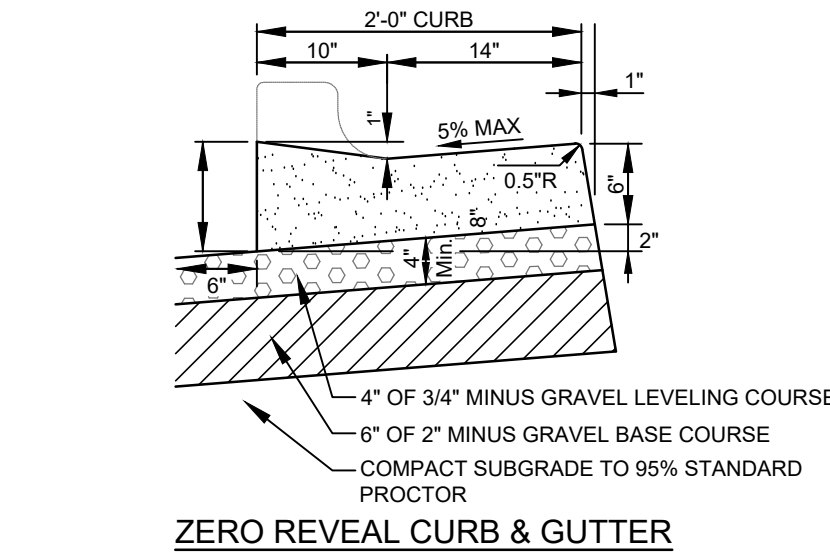
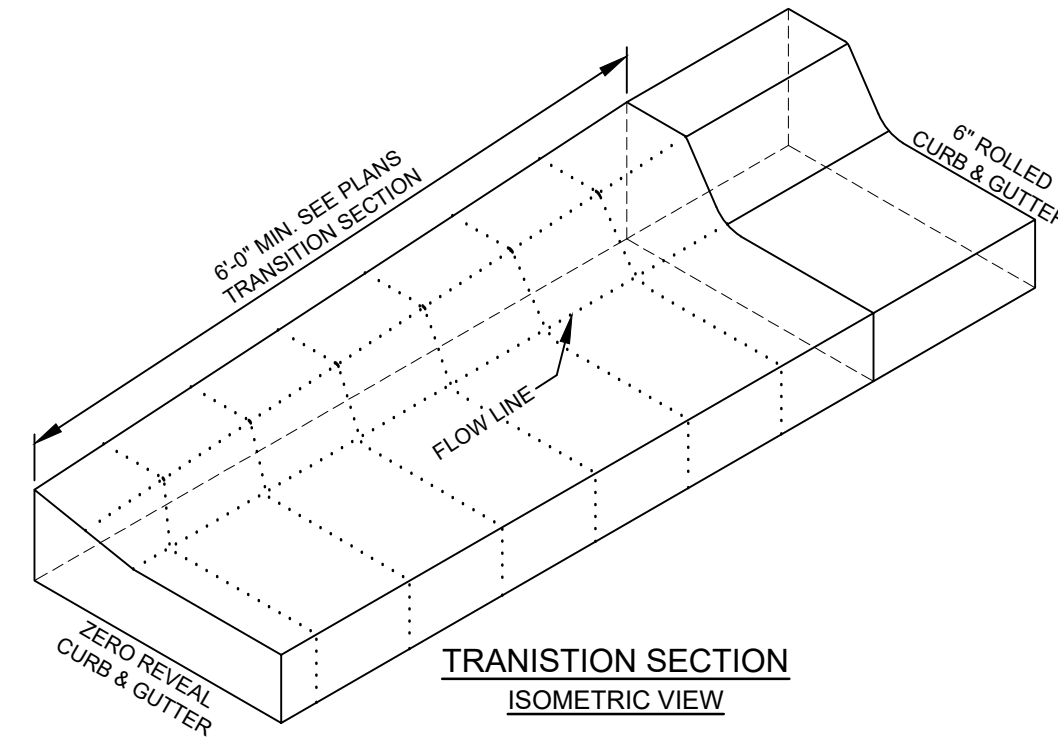
NO.	DATE	ISSUE FOR REVIEW	REVISIONS

C1.0



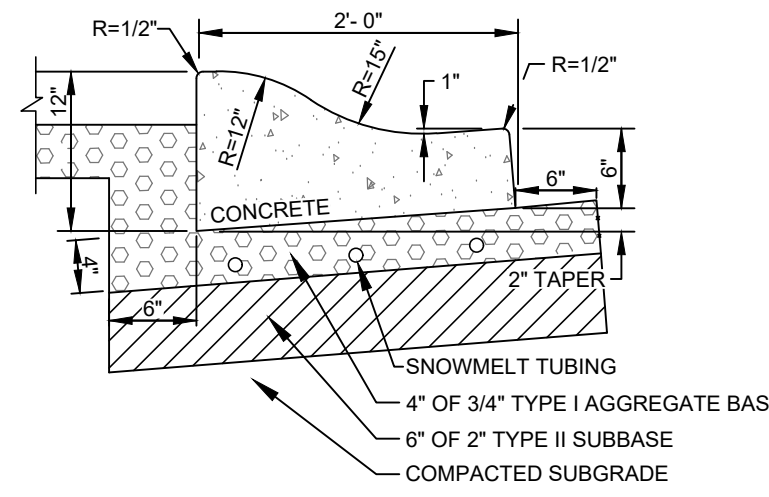
- NOTES:
1. SUBBASE CAN BE 2" TYPE II OR 1/2" TYPE I CRUSHED AGGREGATE BASE COURSE.
 2. MATERIALS SHALL CONFORM WITH CURRENT ISPCW STANDARDS, DIVISION 800 AGGREGATES AND ASPHALT.
 3. PAVEMENT SECTION MAY BE MODIFIED IF A PROJECT SPECIFIC GEOTECHNICAL REPORT, STAMPED BY A LICENSED ENGINEER, IS PROVIDED.

1
C1.2 **TYPICAL ASPHALT SECTION**
N.T.S.



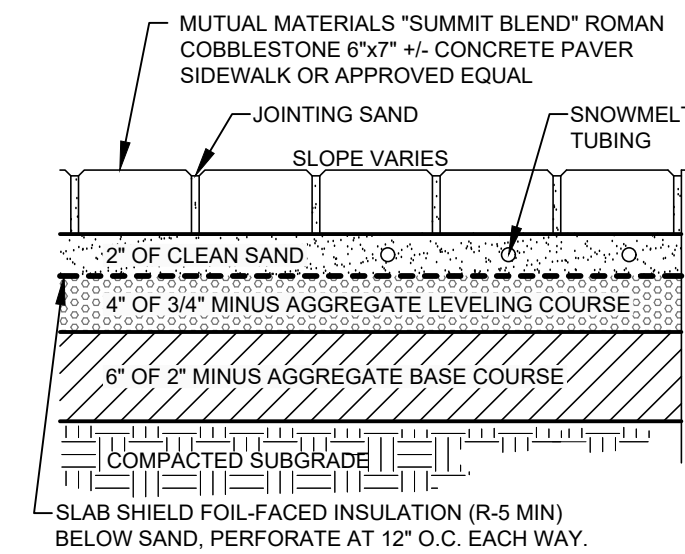
- NOTES:
1. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
 2. CONTINUOUS PLACEMENT PREFERRED. SCORE INTERVALS TO MATCH SIDEWALK WITH 10-FEET MAXIMUM SPACING.
 3. MATERIALS SHALL CONFORM WITH CURRENT ISPCW STANDARDS, DIVISION 800 AGGREGATES AND ASPHALT.

2
C1.2 **TYPICAL CURB TRANSITION DETAIL**
N.T.S.



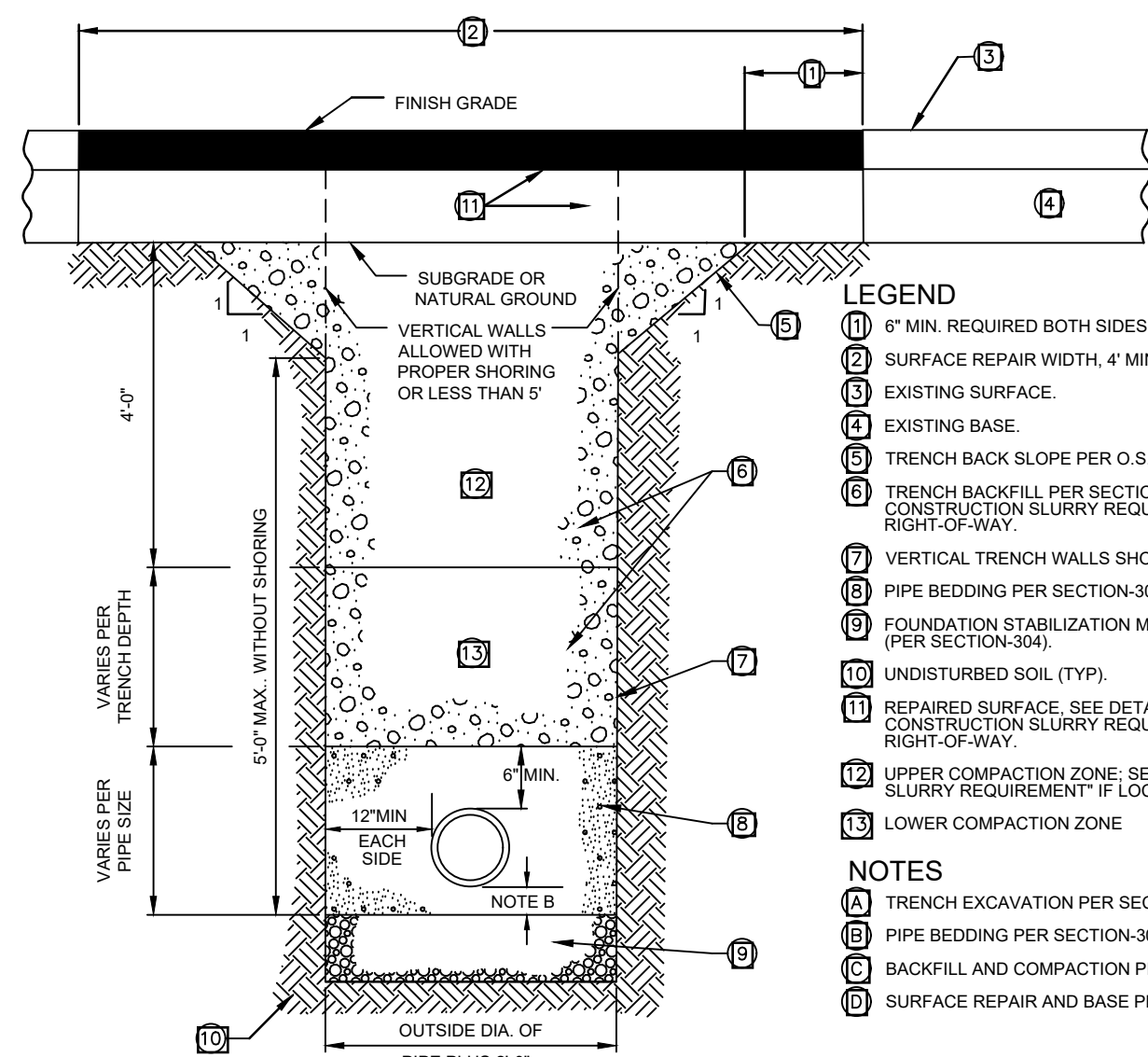
- NOTES:
1. SUBBASE CAN BE 2" TYPE II OR 1/2" TYPE I CRUSHED AGGREGATE BASE COURSE.
 2. MATERIALS SHALL CONFORM WITH CURRENT ISPCW STANDARDS, DIVISION 800 AGGREGATES AND ASPHALT.
 3. PAVEMENT SECTION MAY BE MODIFIED IF A PROJECT SPECIFIC GEOTECHNICAL REPORT, STAMPED BY A LICENSED ENGINEER, IS PROVIDED.
 4. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
 5. CONTINUOUS PLACEMENT PREFERRED. SCORE INTERVALS 10-FEET MAXIMUM SPACING (8-FEET WISDEWALK).

3
C1.2 **HEATED 6\"/>**



- NOTES:
1. 1/2-INCH PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADI.
 2. CONTINUOUS PLACEMENT PREFERRED. SCORE AT INTERVALS TO MATCH WIDTH OF WALK NOT TO EXCEED 5 FEET SPACING.
 3. 1/2" TRANSVERSE PREFORMED BITUMINOUS JOINTS AT THE TERMINUS POINTS FOR CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS.
 4. MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPCW SPECIFICATIONS.
 5. SURFACING MATERIAL FOR THE NEW SIDEWALKS ALONG EAST AVENUE AND 5TH STREET SHALL BE TITAN CONCRETE MIX.

5
C1.2 **HEATED CONCRETE SIDEWALK SECTION**
N.T.S.



- LEGEND
- 1 6" MIN. REQUIRED BOTH SIDES, SAWCUT REQUIRED.
 - 2 SURFACE REPAIR WIDTH, 4" MINIMUM.
 - 3 EXISTING SURFACE.
 - 4 EXISTING BASE.
 - 5 TRENCH BACK SLOPE PER O.S.H.A. OR SUITABLE SHORING.
 - 6 TRENCH BACKFILL PER SECTION-306, OR SEE "KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT" IF LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
 - 7 VERTICAL TRENCH WALLS SHORING PER O.S.H.A.
 - 8 PIPE BEDDING PER SECTION-305 (SEE SD-302).
 - 9 FOUNDATION STABILIZATION MAY VARY PER SOIL TYPE AND STABILITY (PER SECTION-304).
 - 10 UNDISTURBED SOIL (TYP).
 - 11 REPAIRED SURFACE. SEE DETAILS 1 AND 2. SEE "KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT" IF LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
 - 12 UPPER COMPACTION ZONE. SEE "KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT" IF LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
 - 13 LOWER COMPACTION ZONE.

- NOTES
- 1 TRENCH EXCAVATION PER SECTION-301.
 - 2 PIPE BEDDING PER SECTION-305.
 - 3 BACKFILL AND COMPACTION PER SECTION-306.
 - 4 SURFACE REPAIR AND BASE PER DETAIL 3C20.

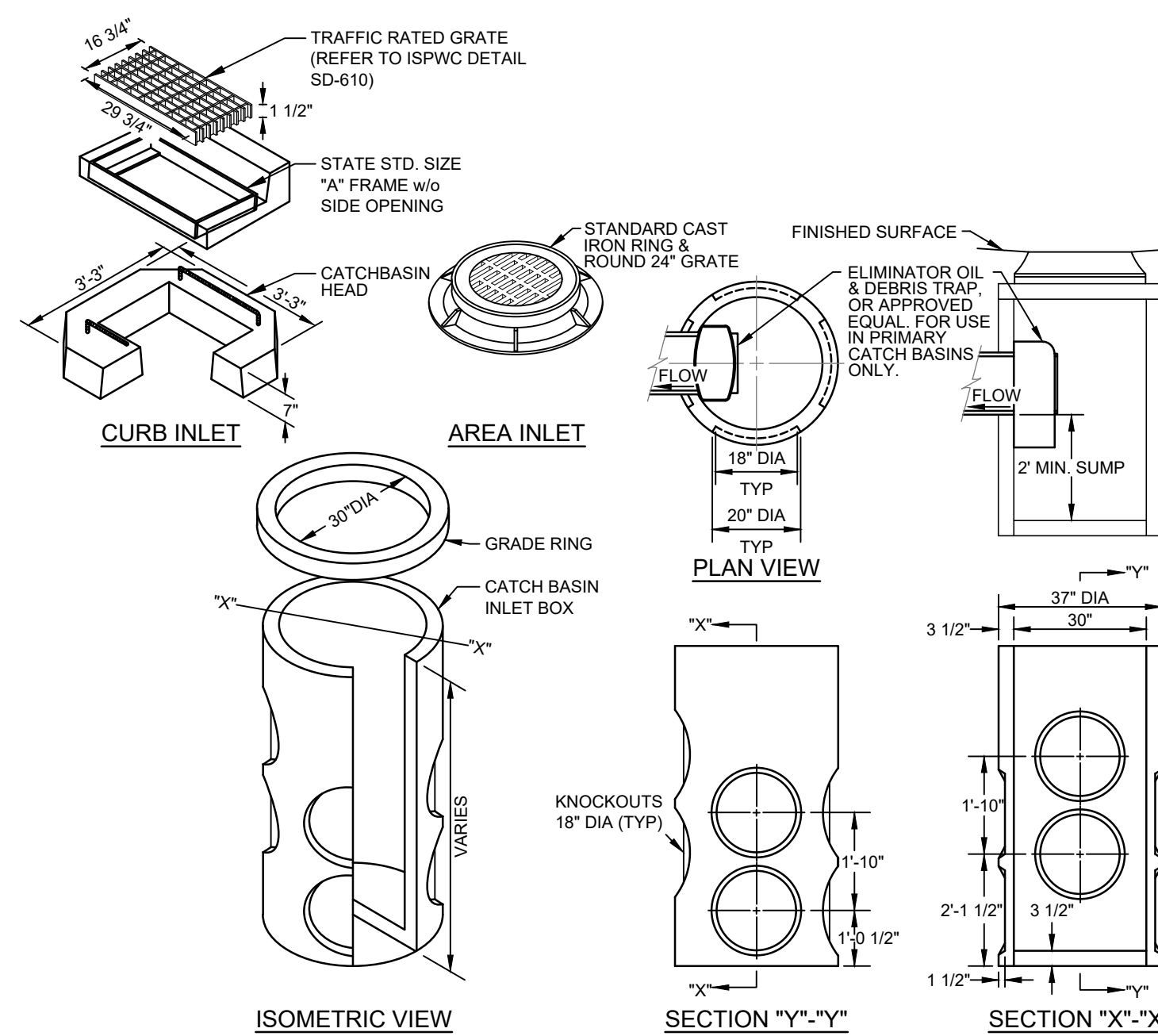
KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT
IN AREAS WHERE IT IS NECESSARY TO CUT THE ASPHALT PAVEMENT AND DIG A TRENCH FOR BURIAL OF CONDUIT CABLE OR OTHER CITY UTILITY, THE TRENCH SHALL BE BACKFILLED WITH A LEAN CONCRETE MIX TO THE BOTTOM OF FINISH SURFACE MATERIAL WITH THE FOLLOWING PROPORTIONS OF MATERIALS:

COARSE AGGREGATE (3/4" MINUS) 2,600 LBS.
SAND 800 LBS.
PORTLAND CEMENT 94 LBS.
WATER 11 GAL. (MAX.)

WATER CONTENT IS MAXIMUM AND MAY BE REDUCING DOWNWARD. CARES SHALL BE TAKEN TO ASSURE THAT EXCESS WATER IS NOT PRESENT IN THE MIXING DRUM PRIOR TO CHARGING THE MIXER WITH MATERIALS. THOROUGH MIXING WILL BE REQUIRED PRIOR TO DISCHARGE.

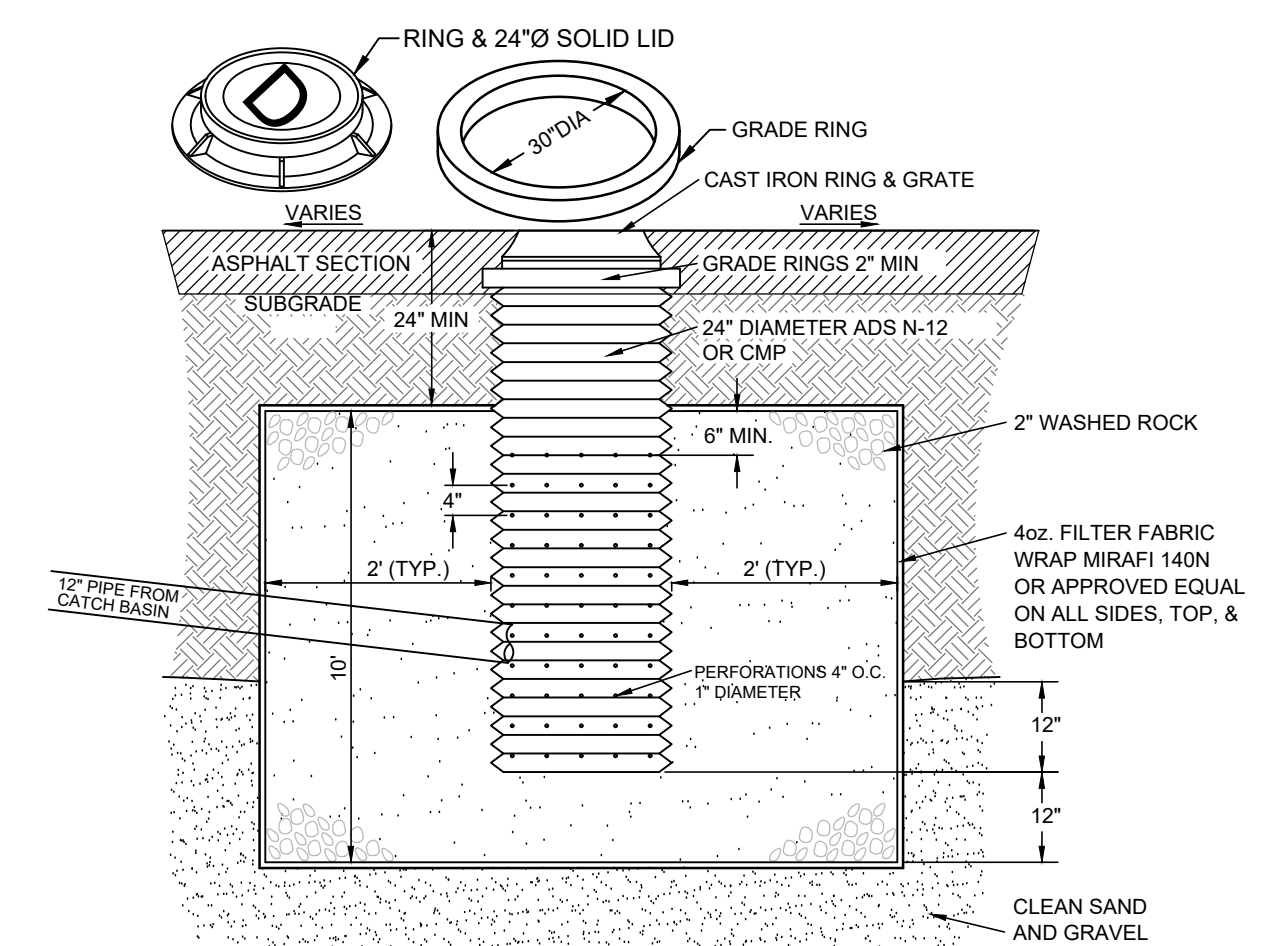
NO COMPACTION, VIBRATION OR FINISHING IS REQUIRED. THE LEAN CONCRETE MIX SHALL BE STRUCK OFF AT OR BELOW THE ELEVATION OF THE PLANT MIX SURFACING WITH A SQUARE-NOSE SHOVEL OR SIMILAR HAND TOOL. THE BACKFILL MIX SHALL BE ALLOWED TO SET FOR A MINIMUM OF 2 HOURS BEFORE THE PERMANENT PLANT MIX SURFACING IS PLACED TO COMPLETE THE TRENCH REPAIR. TEMPORARY PLACEMENT OF ASPHALT COLD MIX SURFACING MAY BE NECESSARY TO ACCOMMODATE TRAFFIC WITHIN THE FIRST 2 HOURS OF BACKFILL PLACEMENT PRIOR TO COMPLETING THE PERMANENT REPAIR.

6
C1.2 **TYPICAL TRENCH SECTION**
N.T.S.
CITY OF KETCHUM STANDARD DRAWING NO. 12



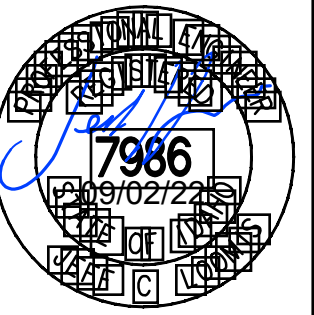
- CATCH BASIN INSTALLATION NOTES:**
1. A PRIMARY CATCH BASIN IS DEFINED AS THE FIRST STORM STRUCTURE UPSTREAM OF A DRYWELL. A SATELLITE CATCH BASIN IS DEFINED AS THE STORM STRUCTURE UPSTREAM OF THE PRIMARY CATCH BASIN.
 2. THE OIL & DEBRIS TRAP SHALL BE INSTALLED ON THE OUTLET OF THE PRIMARY CATCH BASIN ONLY. NOT ON SATELLITE CATCH BASINS.
 3. PLACE A MINIMUM OF 4" OF COMPACTED BEDDING ON PREPARED SUBGRADE AS SPECIFIED IN ISPCW SECTION 305 - PIPE BEDDING. EXTEND BEDDING EITHER TO THE LIMITS OF THE EXCAVATION OR AT LEAST 12" OUTSIDE THE LIMITS OF THE BASE SECTION.
 4. FILL THE BALANCE OF THE EXCAVATED AREA WITH SELECT MATERIAL. COMPACTED LEVEL TO THE TOP OF THE BEDDING.
 5. PROVIDE A SMOOTH AND LEVEL BEARING SURFACE ON THE BEDDING SURFACE.

7
C1.2 **30\"/>**



- NOTES:
1. THE BED SHALL BE EXCAVATED A MINIMUM OF 24" INTO CLEAN SAND AND GRAVEL.
 2. MAXIMUM DEPTH SHALL NOT EXCEED 12 FEET.
 3. IF CLEAN SAND AND GRAVEL IS NOT ENCOUNTERED WITHIN 12 FEET, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER.
 4. GRATE OR SOLID LID AS APPROVED BY CITY OF KETCHUM.

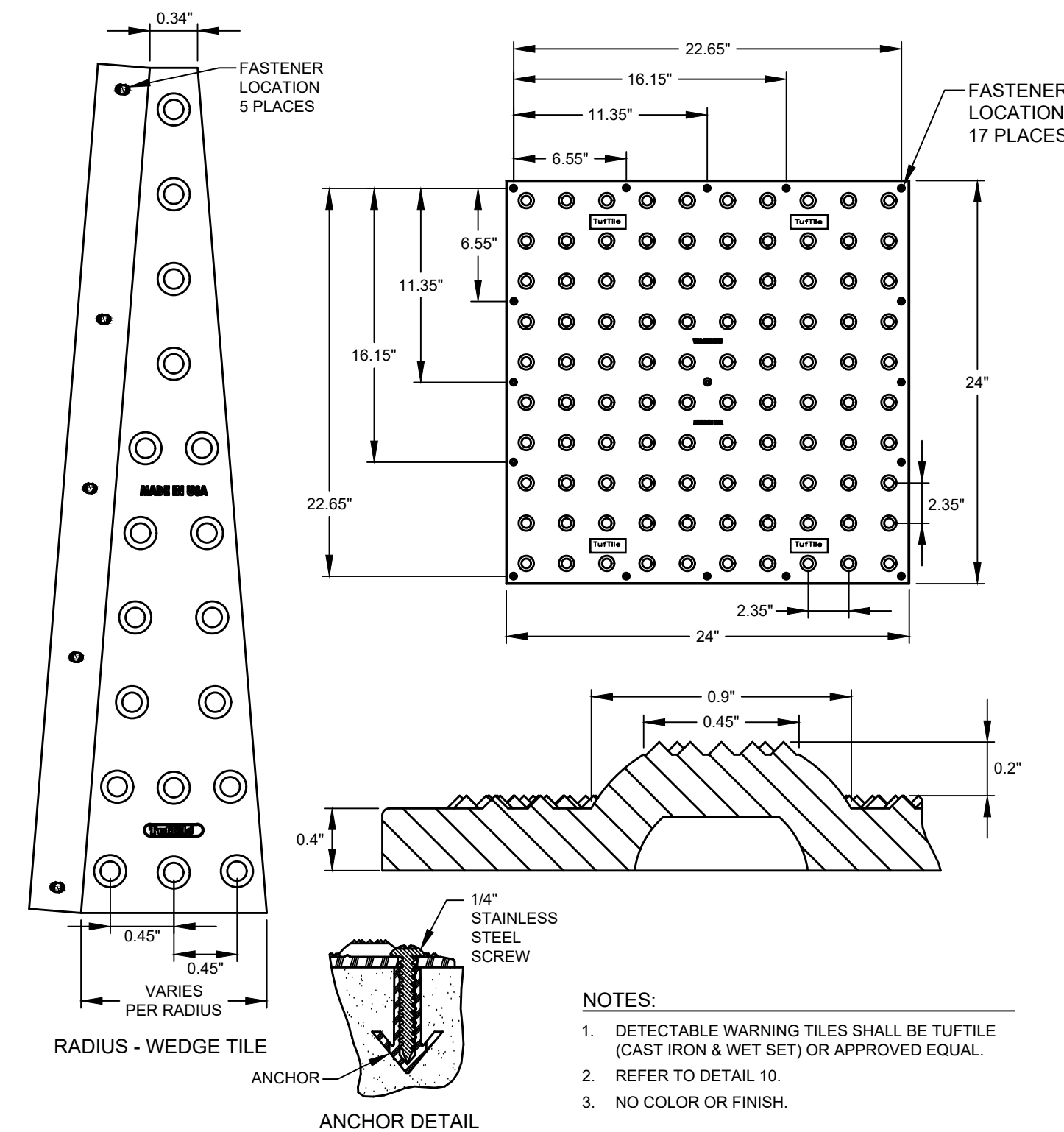
8
C1.2 **DRYWELL DETAIL (PUBLIC)**
N.T.S.
CITY OF KETCHUM STANDARD DRAWING NO. 10



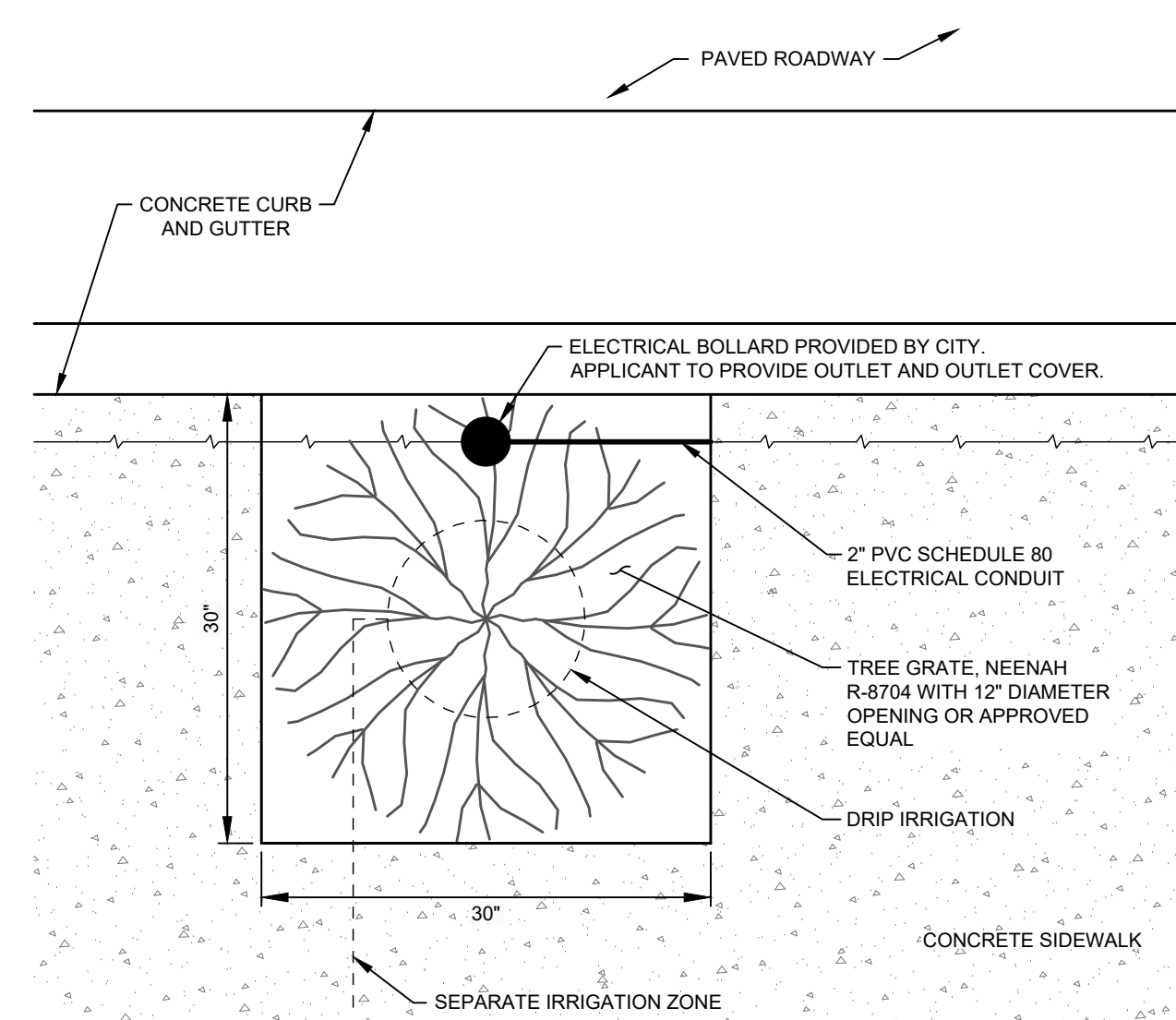
CT DESIGNED BY
CT DRAWN BY
JL CHECKED BY

GALENA ENGINEERING, INC.
Civil Engineers & Land Surveyors
317 N. River Street
Halley, Idaho 83333
email: galena@galena-engineering.com

NO.	DATE	BY	REVISIONS
1	08/02/22	CT	CITY COMMENTS REVISION (8/30/22)

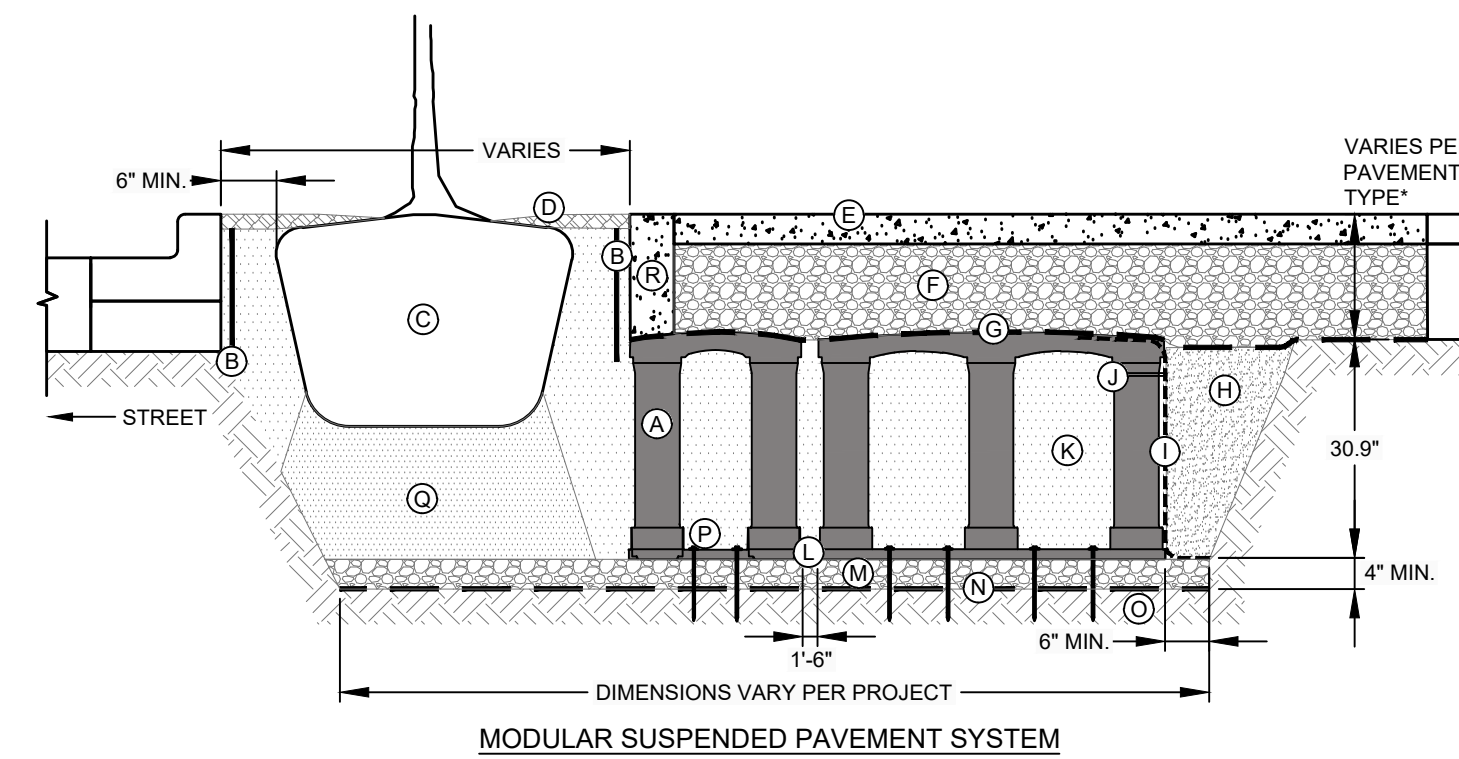


1
C1.3 DETECTABLE WARNING PLATE DETAIL
N.T.S.
CITY OF KETCHUM STANDARD DRAWING NO. 9



- NOTES:**
- TREE TO BE 3" MINIMUM CALIPER AUTUMN BLAZE MAPLE OR APPROVED EQUAL.
 - CITY OF KETCHUM REQUIRES DRIP IRRIGATION TO BE ON A SEPARATE ZONE WITH HUNTER/RAINWISE SMART CLOCK, OR APPROVED EQUAL, FOR REMOTE ACCESS BY CITY.
 - APPLICANT TO CONNECT AND PROVIDE CONDUITS, WIRING, AND SEPARATE CIRCUIT, OR TIE TO A CITY CIRCUIT FOR POWER.
 - NO DIRECT BURIAL WIRE PERMITTED.
 - TREE INSTALLATION TO BE MODULAR SUSPENDED PAVEMENT SYSTEM. SEE TREE WELL SECTION VIEW, DETAIL 2.

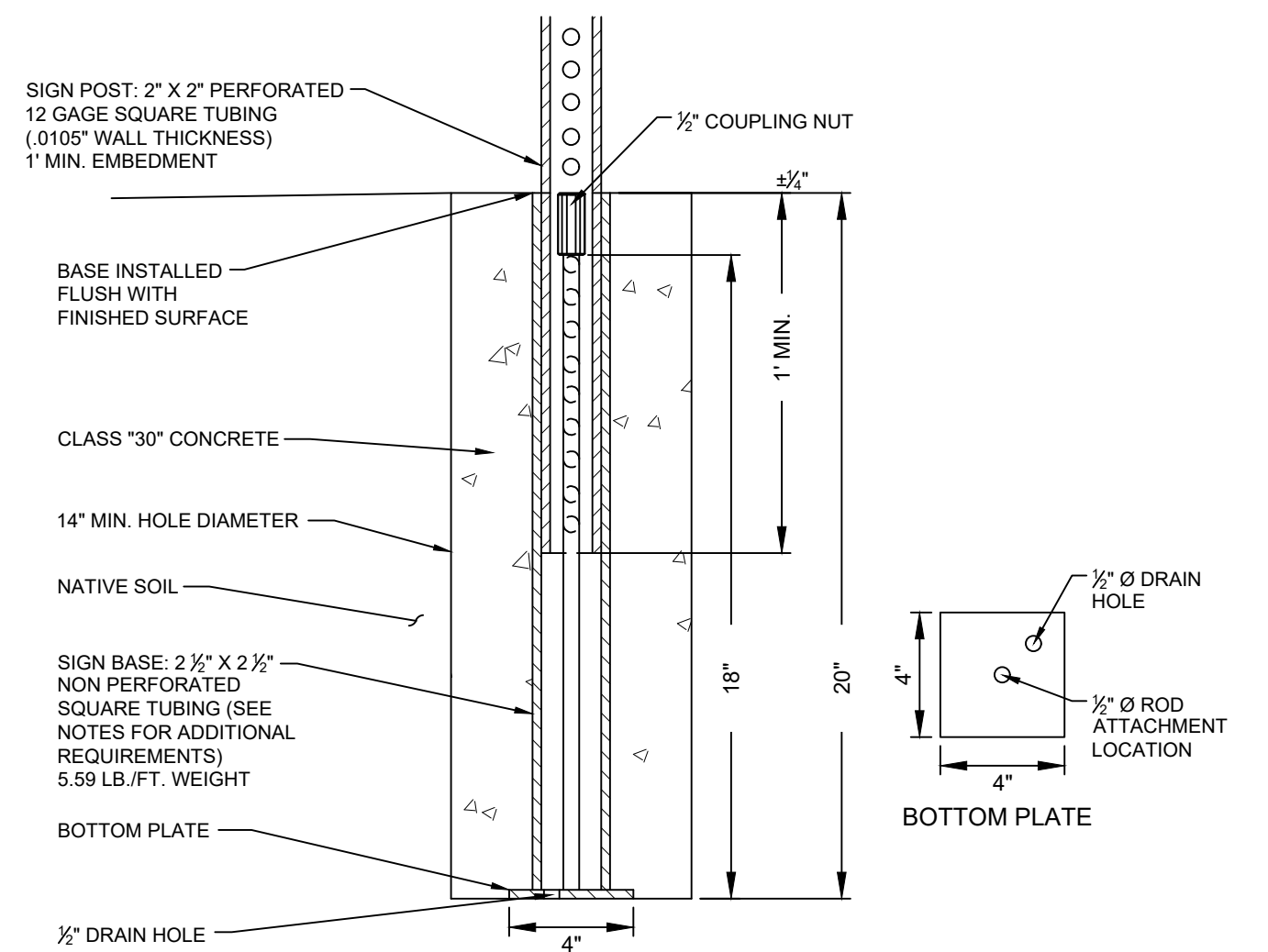
2
C1.3 TREE WELL DETAILS
N.T.S.
CITY OF KETCHUM STANDARD DRAWING NO. 9



- KEY PLAN:**
- SILVA CELL SYSTEM (DECK, BASE, AND POSTS) OR APPROVED EQUAL.
 - DEEPROOT ROOT BARRIER, 12" OR 18", DEPTH DETERMINED BY THICKNESS OF PAVEMENT SECTION. INSTALL DIRECTLY ADJACENT TO CONCRETE EDGE RESTRAINT. PREVENTS ROOTS FROM DISTURBING PAVEMENT.
 - TREE ROOT PACKAGE, SIZE VARIES
 - TREE OPENING TREATMENT, PER PROJECT SPECIFICATIONS
 - SURFACE TREATMENT, PER PROJECT
 - AGGREGATE BASE COURSE, DEPTH VARIES PER PROJECT
 - GEOTEXTILE TO KEEP AGGREGATE FROM MIGRATING DOWN THROUGH CELL DECK
 - BACKFILL, PER PROJECT SPECIFICATIONS
 - GEOTEXTILE TO PROVIDE FOR VERTICAL SEPARATION BETWEEN PLANTING SOILS AND BACKFILL WHILE ALLOWING ROOT PENETRATION INTO ADJACENT SOILS. 6" (150 mm) TOE (OUTWARD FROM BASE) AND 12" (305 mm) EXCESS (OVER TOP OF DECK).
 - CABLE TIE, ATTACHING GEOTEXTILE TO SILVA CELL AT BASE OF UPPER POST FLARE
 - PLANTING SOIL, PER PROJECT SPECIFICATIONS, COMPACTED TO 70-80% PROCTOR
 - SILVA CELL BASE SLOPE, 10% MAX
 - 4" (100 mm) MIN AGGREGATE SUB BASE, COMPACTED TO 95% PROCTOR
 - GEOTEXTILE, TO PROVIDE SEPARATION BETWEEN SUBGRADE AND AGGREGATE BASE
 - SUBGRADE, COMPACTED TO 95% PROCTOR
 - PIN, PER SILVA CELL SPECIFICATIONS, TO KEEP CELLS IN PLACE DURING CONSTRUCTION
 - PLANTING SOIL BELOW TREE ROOT PACKAGE, COMPACTED TO 85-90% PROCTOR
 - CONCRETE EDGE RESTRAINT TO STABILIZE EDGE AND PREVENT AGGREGATE MIGRATION INTO TREE OPENING.
- MINIMUM PAVEMENT PROFILE OPTIONS TO MEET H-20 LOADING**
- | | |
|-------------|-----------------|
| PAVEMENT | + AGGREGATE |
| 4" CONCRETE | BASE COURSE |
| 3" PAVER | + 4" AGGREGATE |
| 4" ASPHALT | + 12" AGGREGATE |
| 2.6" PAVER | + 5" CONCRETE |

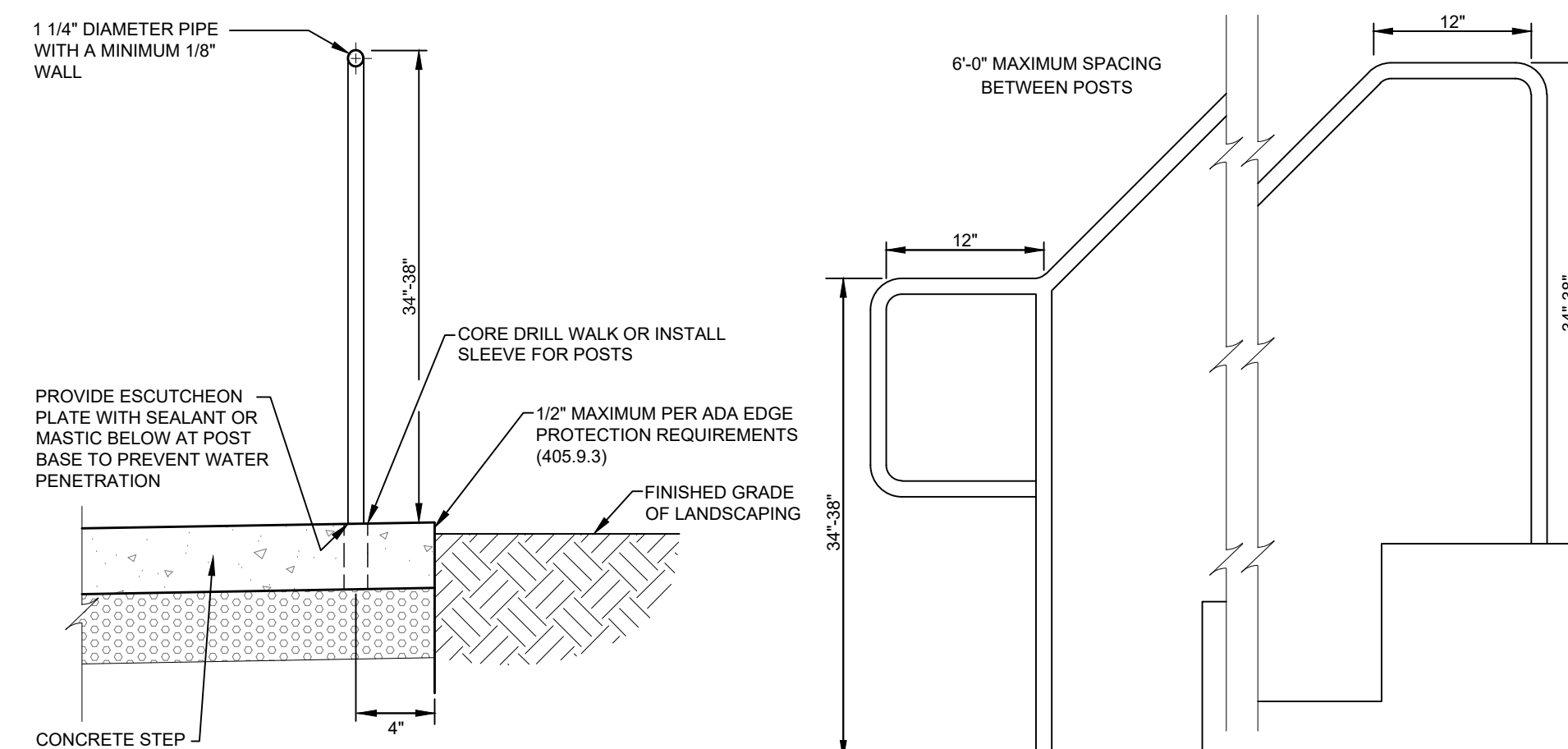
SECTION VIEW

- NOTES:**
- EXCAVATION SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE HEALTH AND SAFETY REGULATIONS.
 - INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - A PROJECT SPECIFIC DETAIL WILL NEED TO BE PROVIDED TO CITY FOR REVIEW AND APPROVAL.



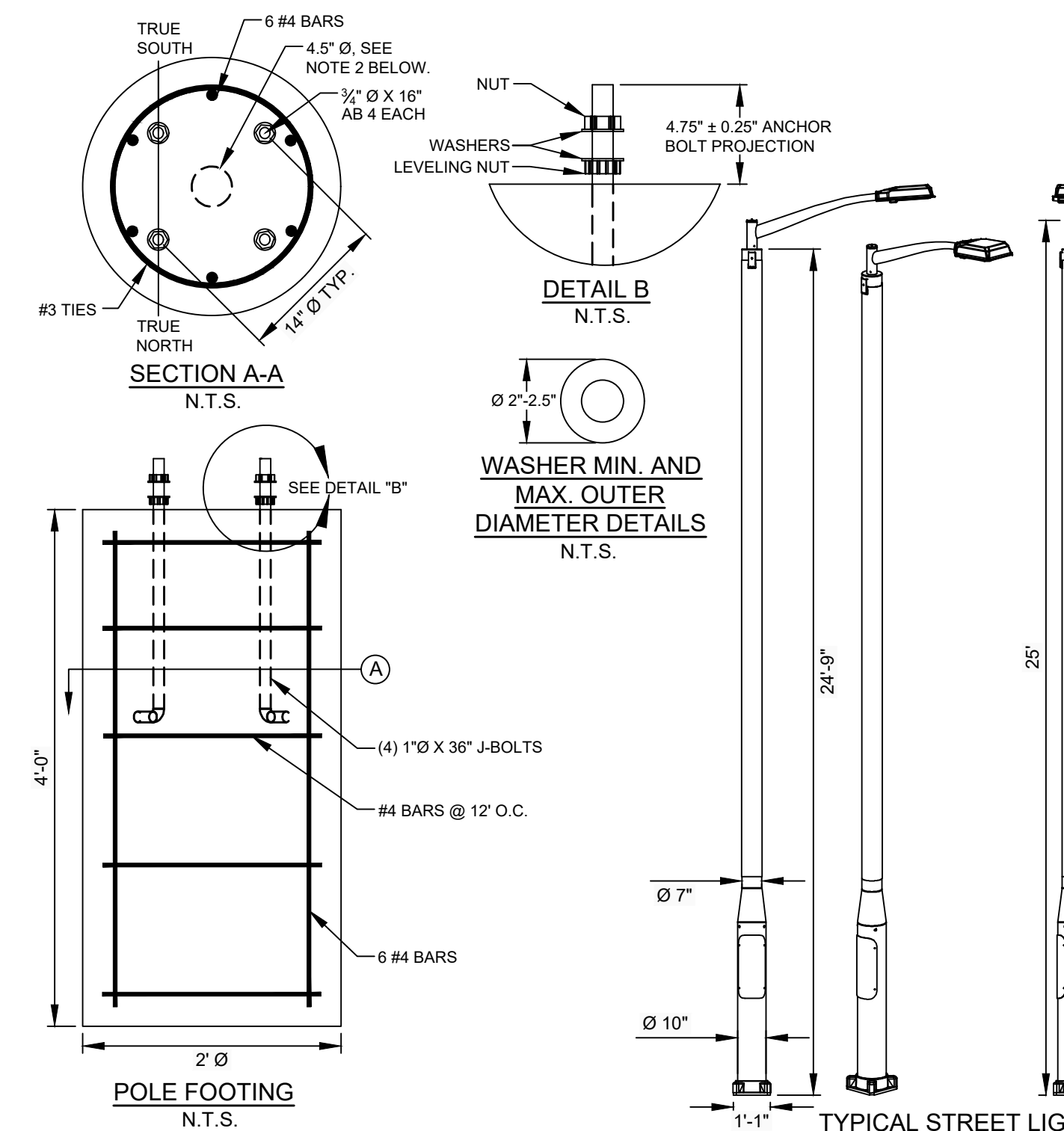
- NOTES:**
- BASES SHALL BE INSTALLED TO BE FLUSH WITH SURFACE.
 - ALL INSTALLATIONS SHALL HAVE 14" Ø MINIMUM FOUNDATION OR GROUTED INTO SOLID ROCK.
 - ALL STREET SIGNS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MUTCD.
 - SIGN PLACEMENT SHALL BE APPROVED BY THE CITY OF KETCHUM.
 - CITY TO PROVIDE BASES.
- SIGN BASE MATERIAL & DIMENSION REQUIREMENTS**
- 2 1/2" OUTSIDE TUBE STEEL (20" LENGTH)
 - 2 1/2" INSIDE TUBE STEEL
 - 3/16" THICK
- INTERNAL ROD MATERIAL & DIMENSION REQUIREMENTS**
- 1/2" COLD ROLLED ROD (18" LENGTH)
 - 1/2" COUPLING NUTS
- BOTTOM PLATE MATERIAL & DIMENSION REQUIREMENTS**
- 4" X 4" X 1/2" STEEL STRAP

3
C1.3 TYPICAL SIGN BASE DETAIL
N.T.S.
CITY OF KETCHUM STANDARD DRAWING NO. 13



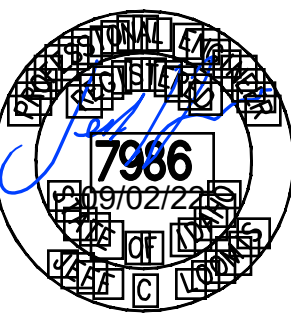
- NOTES:**
- HANDRAIL SHALL BE PAINTED. PAINT SPECIFICATIONS PER OWNER.
 - CLEAR WIDTH: THE CLEAR WIDTH BETWEEN HANDRAILS SHALL BE 36 INCHES MINIMUM PER ADA REQUIREMENTS (405.9.3)

4
C1.3 TYPICAL HANDRAIL AND STAIRS DETAIL
N.T.S.



- NOTES:**
- STREET LIGHT IS SOLARONE RFS DESIGN 158 LFP OR APPROVED EQUAL.
 - ANY CONDUITS AND/OR GROUNDING WIRES MUST BE HARDWIRED AND CONTAINED WITHIN A 4.5" Ø CIRCLE CENTERED ON THE FOUNDATION. GROUNDING ELECTRODE WIRE AND AC SUPPLY WIRE (IF REQUIRED) ARE 5' MIN. ABOVE THE BASE.
 - ANCHOR BOLT ORIENTATION TO TRUE NORTH/SOUTH IS ONLY RELEVANT FOR OFF-GRID SOLAR POLES. DISREGARD FOR GRID-TIED POLES.
 - GROUNDING WIRE MUST BE 60" FROM BASE SO IT CAN REACH THE GROUNDING LUG INSIDE THE POLE.
 - STREET LIGHT SHALL BE 25' IN HEIGHT OR AS APPROVED BY CITY OF KETCHUM.

5
C1.3 TYPICAL STREET LIGHT
N.T.S.
CITY OF KETCHUM STANDARD DRAWING NO. 14

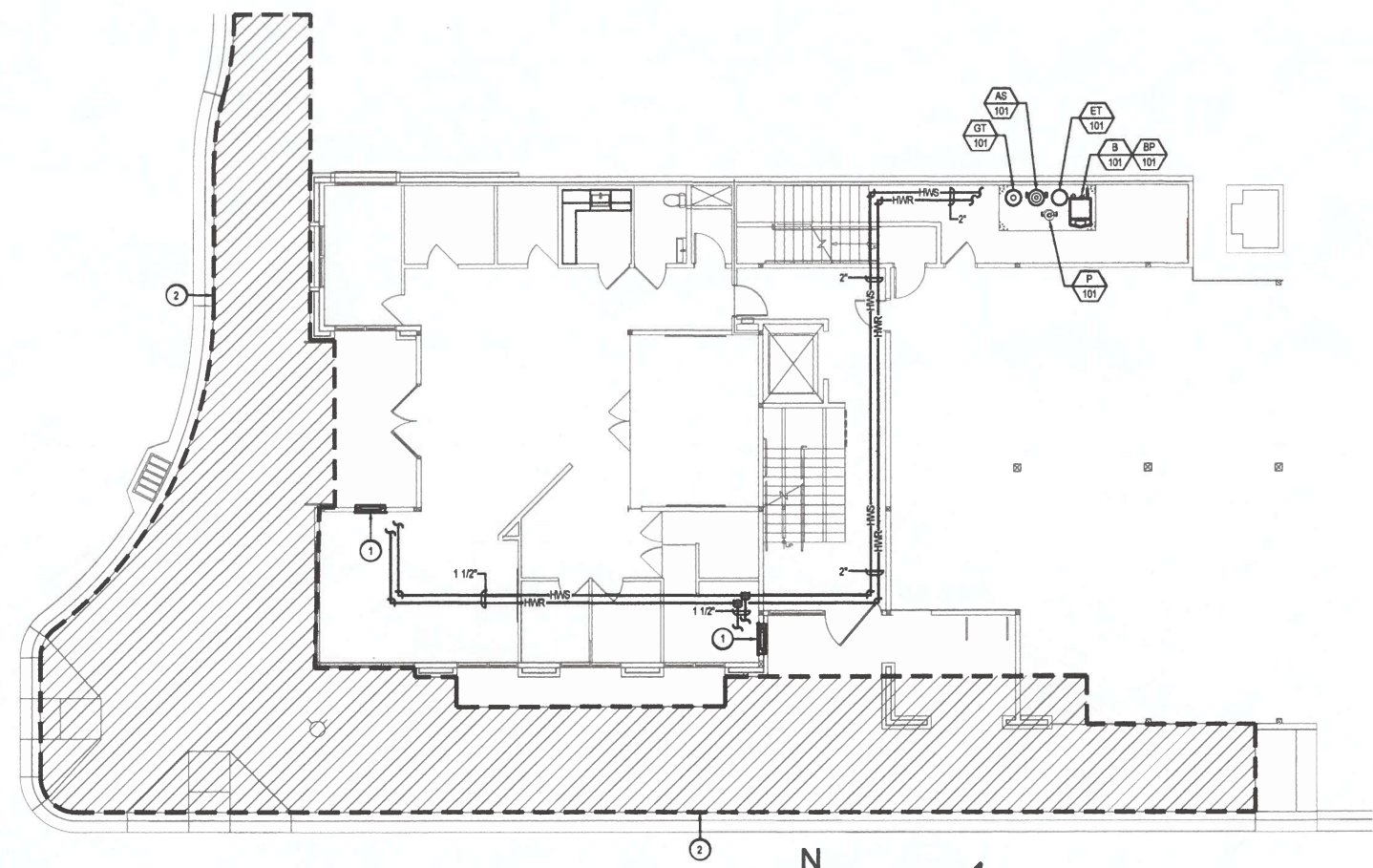


CT DESIGNED BY
CT DRAWN BY
JL CHECKED BY

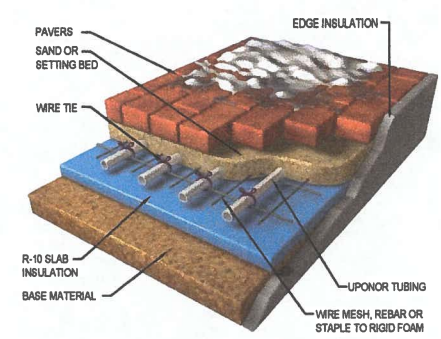
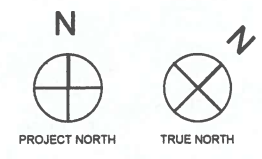
GALENA
ENGINEERING, INC.
Civil Engineers & Land Surveyors
317 N. River Street
Halley, Idaho 83333
(208) 768-1705
email: galena@galena-engineering.com

NO.	DATE	BY	REVISIONS
1	08/02/22	CT	CITY COMMENTS REVISION (8/30/22)

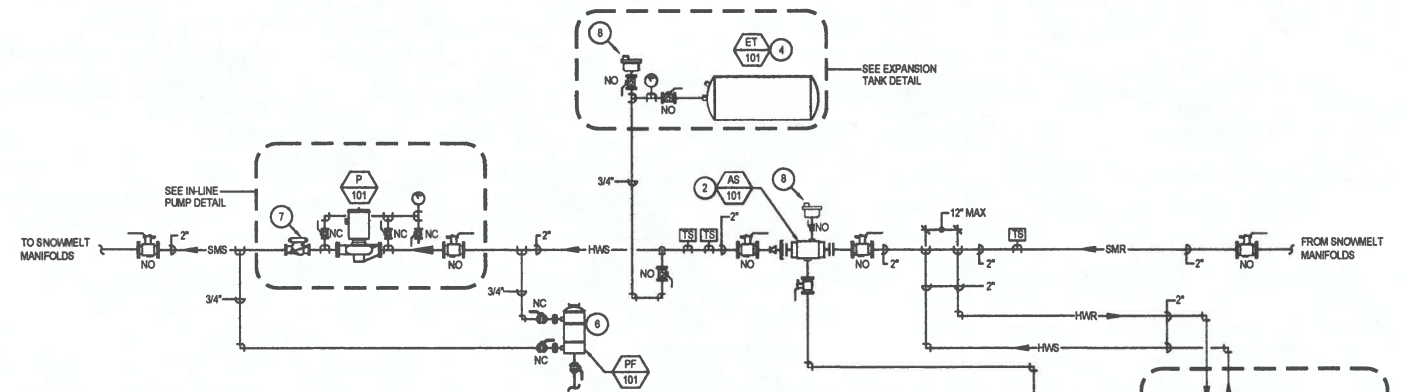
KEYED NOTES:
 8 SYMBOL USED FOR NOTE CALLOUT.
 1. LOCATION OF SNOW MELT MANIFOLD.
 2. SNOW MELT ZONE.



SNOW MELT PLAN
 SCALE: 1/8" = 1'-0"



SNOW MELT TUBING INSTALLATION DETAIL
 SCALE: N.T.S.



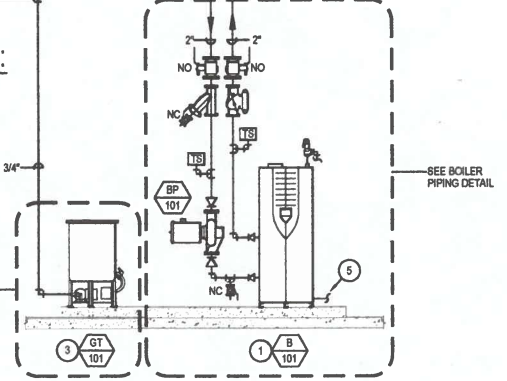
SNOW MELT SYSTEM PIPING SCHEMATIC
 SCALE: N.T.S.

GENERAL NOTES (SNOW MELT SYSTEM):

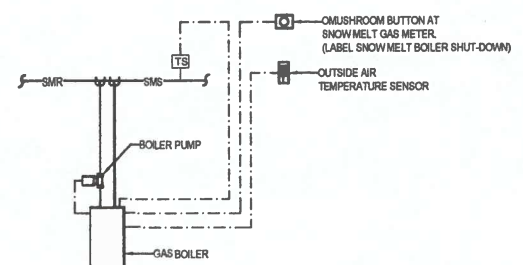
- SEE SPECIFICATION DIVISION 230100 FOR PIPING SYSTEM REQUIREMENTS.
- SCHEMATIC IS FOR GENERAL INFORMATION (PIPE SIZES, VALVE TYPE AND LOCATIONS, AND OTHER PIPING COMPONENTS). SEE FLOOR PLANS FOR LAYOUT AND ROUTING. REFER TO THE EQUIPMENT MANUFACTURER'S INSTALLATION MANUALS FOR SPECIFIC REQUIREMENTS.
- PROVIDE AIR VENTS AT ALL HIGH POINTS IN SYSTEM. ALL AIR VENTS LOCATED IN MECHANICAL ROOM SHALL BE AUTOMATIC AIR VENTS PIPED TO DRAIN. ALL OTHER AIR VENTS SHALL BE MANUAL.
- SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT CONNECTION.
- ALL EQUIPMENT SHALL BE SECURED TO HOUSEKEEPING PADS.
- ALL VALVES SHALL BE LOCATED IN ACCESSIBLE LOCATIONS.
- KEEP PIPING HIGH IN THE SPACE AND OUT OF NORMAL WALKING AND WORK AREAS.
- REFER TO THE CONTROL SCHEMATICS FOR REQUIRED LOCATIONS OF PIPING WELLS FOR THE CONTROL SYSTEM.

KEYED NOTES (SNOW MELT SYSTEM):

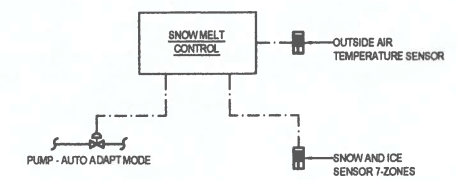
- REFER TO THE BOILER PIPING DETAIL FOR ADDITIONAL REQUIREMENTS.
- INLINE AIR SEPARATOR.
- GLYCOL MAKE-UP PACKAGE.
- SUSPENDED DIAPHRAGM TYPE EXPANSION TANK.
- ROUTE FULL SIZE CPVC CONDENSATE LINE THROUGH NEUTRALIZING KIT TO FLOOR SINK (TYPICAL)
- POT FEEDER.
- CHECK VALVE (TYPICAL).
- B&G HIGH VELOCITY AIR VENT, MODEL 107A. (TYPICAL)



SNOW MELT BOILER PIPING DETAIL
 SCALE: N.T.S.



SNOW MELT BOILER CONTROL SCHEMATIC
 SCALE: N.T.S.



SNOW MELT CONTROL SCHEMATIC
 SCALE: N.T.S.

DATE:	07/13/22
PROJECT #:	21-402
DRAWN:	GB
ISSUE:	
DRC:	
Permit Set	

M301
 MAIN LEVEL HVAC PLAN

1st & SUN VALLEY OFFICE BUILDING
 131 EAST SUN VALLEY RD
 KETCHUM, ID 83340



This drawing and design is the property of Farmer Payne Architects, LLC. They are submitted on the condition that they are not to be used, reproduced, or copied, in whole or part, or used for furnishing information to others, without prior written consent of Farmer Payne Architects, LLC. All common law rights of copyright & otherwise are hereby specifically reserved.

CONDENSING HOT WATER BOILER SCHEDULE

SYMBOL	AREA SERVED	THERMAL EFFICIENCY	FUEL	EWT (°F)	LWT (°F)	BOILER FLOW (GPM)	MAX P.D. (FT H ₂ O)	CAPACITY		MANUFACTURER AND MODEL	REMARKS
								INPUT MBH	OUTPUT MBH		
B-101	SNOW MELT SYSTEM	85%	NAT. GAS	110	140	27	6.5	389.0	387.0	LOCKNVAR MODEL: KBX0400N	1, 2, 3

- REMARKS:
- APPROVED ALTERNATE MANUFACTURERS: SUBMIT FOR APPROVAL.
 - PROVIDE BOILER VENTING KIT, NEUTRALIZING KIT, COMBUSTION AIR INTAKE KIT, SEISMIC VIBRATION ISOLATORS, LOW WATER CUT-OFF, FLOW SWITCH, MODULATING GAS BURNER, CONDENSATE TRAP, 316L STAINLESS STEEL COMBUSTION CHAMBER, EXHAUST PIPE, CSD-1 AND CSA RESET.
 - BOILER SHALL BE PROVIDED VIFACTORY START-UP. START-UP IS NOT COMPLETE UNTIL ALL BURNERS AND BLOWER ARE CALIBRATED FOR PEAK PERFORMANCE AND AT COMPLETION OF PROJECT ALL BURNERS, BLOWERS, HEAT EXCHANGERS, AND OTHER INTERNAL PARTS SHALL BE THOROUGHLY CLEANED OF CONSTRUCTION DEBRIS.

BOILER PUMP SCHEDULE

SYMBOL	AREA SERVED	TYPE	CAPACITY			MOTOR			SUCTION DIFFUSER	TRIPLE DUTY VALVE	OPERATING WEIGHT (LBS)	MANUFACTURER AND MODEL	REMARKS
			FLOW (GPM)	HEAD (FT)	MIN EFF	AMPS	RPM	V/Ø					
BP-101	SNOW MELT SYSTEM	INLINE	27	21	—	2.5	—	115/1	N/A	N/A	80	GRUNDFOS MAGN3 40-80	1, 2

- REMARKS:
- APPROVED ALTERNATE MANUFACTURERS: ARMSTRONG, B & G, TACO, WILO, PACO, PEERLESS, PATTERSON.
 - CONTROL PUMP THROUGH CONDENSING BOILER.

PUMP SCHEDULE

SYMBOL	AREA SERVED	TYPE	CAPACITY			MOTOR			SUCTION DIFFUSER	TRIPLE DUTY VALVE	OPERATING WEIGHT (LBS)	MANUFACTURER AND MODEL	REMARKS
			FLOW (GPM)	HEAD (FT)	MIN EFF	HP	RPM	V/Ø					
P-101	SNOW MELT SECONDARY LOOP	INLINE	30	35	—	1/2	—	208/1	N/A	N/A	30	BELL AND GOSSET ECOIRC XL MODEL 55-45	1, 2, 3, 4, 5

- REMARKS:
- APPROVED ALTERNATE MANUFACTURERS: ARMSTRONG, GRUNDFOS, TACO, WILO, PACO, PEERLESS, PATTERSON.
 - PROVIDE UNIT WITH PREMIUM EFFICIENCY MOTOR WITH INTEGRAL VFD.
 - PUMP SEALS SHALL BE COMPATIBLE WITH PROPYLENE GLYCOL.
 - NOTE CONTROL BASED PRESSURE. DIFFERENTIAL (VARIABLE FLOW).
 - SUPPORT PUMP FROM STRUCTURE.

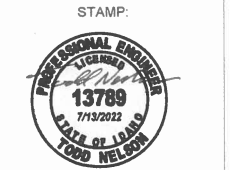
MECHANICAL SPECIALTY EQUIPMENT SCHEDULE

SYMBOL	EQUIPMENT DESCRIPTION	SYSTEM SERVED	DESCRIPTION	MANUFACTURER AND MODEL
AS-101	INLINE AIR SEDIMENT SEPARATOR	HYDRONIC SYSTEM	DESIGN FLOW IS 30 GPM WITH A DESIGN PD OF 1.0 FT-H ₂ O.	B & G MODEL 2" ALTERNATE APPROVED MANUFACTURERS: TACO, ARMSTRONG, AND PACO
ET-101	EXPANSION TANK (HORIZONTAL DIAPHRAGM TYPE)	HYDRONIC SYSTEM	5.31 GAL. CAPACITY, 2.14 ACCEPTANCE GAL., BLADDER TYPE EXPANSION TANK. (PRE-CHARGED TO 12 PSI)	BELL AND GOSSETT HORIZONTAL D-15 ALTERNATE APPROVED MANUFACTURERS: TACO, ARMSTRONG, AND PACO
GT-101	SINGLE PUMP GLYCOL FEEDER	HYDRONIC SYSTEM	PROVIDE WITH LOW LEVEL CUT-OFF AND ALARM ARRANGEMENT INCLUDING A 110V SIGNAL FOR REMOTE ALARM, ISOLATION VALVES, STRAINER, PRESSURE TANK WITH PRESSURE CONTROL, PRESSURE REDUCING VALVE AND GAUGE, 55 GAL. TRANSLUCENT POLYETHYLENE SOLUTION CONTAINER WITH LID TO ACCOMMODATE RELIEF VALVE PIPING, (110V, 60 HZ MOTOR AND CONTROLS WITH PLUG AND CORD). PRESET SYSTEM TO 12 PSI. SOLUTION SHALL BE 40% DOWFROST PROPYLENE GLYCOL WITH INHIBITOR AND 60% WATER.	AUXOM MODEL SF100 ALTERNATE APPROVED MANUFACTURERS: WESSELS
PF-101	POT FEEDER	HYDRONIC SYSTEM	5 GALLON POT FEEDER MOUNTED ON WALL 38" A.F.F.	J. L. WINGERT ALTERNATE APPROVED MANUFACTURERS: SUBMIT FOR APPROVAL

SNOW MELT MANIFOLD SCHEDULE

ZONE #	AREA (ft ²)	INSULATION R _v (F x ft ² x hr/Btu)	HEAT LOAD (Btu/hr/ft ²)	# OF LOOPS	TUBE TYPE & SIZE	TUBE SPACING (in)	SUPPLY WATER (°F)	DESIGN TEMP. DROP (°F)	SURFACE TEMP. (°F)	FLOW RATE (GPM)	HEAD LOSS (PSI)	REMARKS
SNOWMELT	1,150	10.0	140	7	hdPEX 3/4"	9" O.C.	140	25	35	14.83	7.2	1, 2, 3, 4, 5
SNOWMELT	1,150	10.0	140	7	hdPEX 3/4"	9" O.C.	140	25	35	14.83	7.2	1, 2, 3, 4, 5

- REMARKS:
- SNOW MELT CIRCUITS TO BE EQUAL LENGTHS OFF EACH MANIFOLD WITH A 300 FT MAXIMUM TUBE LENGTH. PROVIDE A BALL VALVE FOR EACH OF THE LOOPS. RADIANT FLOOR MANIFOLD DESIGN BASED ON UPONOR STAINLESS STEEL MANIFOLD WITH ISOLATION VALVES AND VISUAL FLOW GAUGES. ALTERNATES SHALL BE EQUAL IN QUALITY AND PERFORMANCE.
 - PANEL TUBING TO BE WITHIN 4" OF PERIMETER.
 - PROVIDE A 35% PROPYLENE GLYCOL 65% WATER SOLUTION.
 - TUBING TO BE RATED FOR 180°F AT 100 PS SERVICE.
 - TUBING FOR SNOW MELT SYSTEM MUST BE LAID OUT IN A COUNTER FLOW PATTERN.



This drawing and design is the property of Farmer Payne Architects, LLC. They are submitted on the condition that they are not to be used, reproduced, or copied, in whole or part, or used for furnishing information to others, without prior written consent of Farmer Payne Architects, LLC. All common law rights of copyright & otherwise are hereby specifically reserved.

1st & SUN VALLEY OFFICE BUILDING
 131 EAST SUN VALLEY RD
 KETCHUM, ID 83340

DATE: 07/13/22
 PROJECT #: 21-402
 DRAWN: GB
 ISSUE: DRC
 Permit Set

M302
 MAIN LEVEL HVAC PLAN



Attn: Steve Kearns, KMV Builders

8/10/22

Re: Snowmelt system proposal for new Office Building located at
131 East Sun Valley Rd, Ketchum, Idaho

Project Description: New construction, provide a single zone of snowmelt on the East Sun Valley Rd and N. 1st Ave sidewalks, with automated controls

Scope of work: Rough in sleeves in footings for supply and return distribution piping and slab sensor conduit. Rough in and insulate supply and return piping prior to slab pour. Once the building is dried in, install boiler venting, install new boiler and controls in the Mechanical room with zone pump located in the mechanical room. Tubing will be installed on 9" centers. Install copper header piping and auxiliary equipment and pressure test entire system to 200% of maximum operating pressure. Install Tekmar snowmelt controls, sensors and pump controls, test controls, perform commissioning checklists on boilers, test complete system and place in service.

Materials:

Heat source: (2) Lochinvar Noble NKB199 high efficiency boilers

Pumps: Grundfos MAGNA 1 & UPS series w/ Webstone Isolation flanges

Zone and Distribution tubing: Rehau O2 barrier PEXa, Type L copper

Additional equipment and materials: Condensate neutralizer kit, automatic system feeder, brass and copper and fittings, valves, expansion tank, wye strainer, air vents, pipe insulation, mounting hardware, PVC vent pipe and fittings, wiring supplies, and polypropylene glycol

Controls: Tekmar 671 Snow melting control, 094 sensor and 091 socket.
Borg interval timer



Lochinvar[®]
HIGH EFFICIENCY BOILERS & WATER HEATERS

NOBLE[®]
RESIDENTIAL BOILER

Submittal Sheet

NKB-Sub-02

NOBLE[®] RESIDENTIAL CONDENSING BOILER MODELS NKB080-199

Job Name: _____ Model No. _____
 Location: _____ Type Gas: _____
 Engineer: _____ Equipment Tag(s): _____
 Agent/Wholesaler: _____
 Contractor: _____

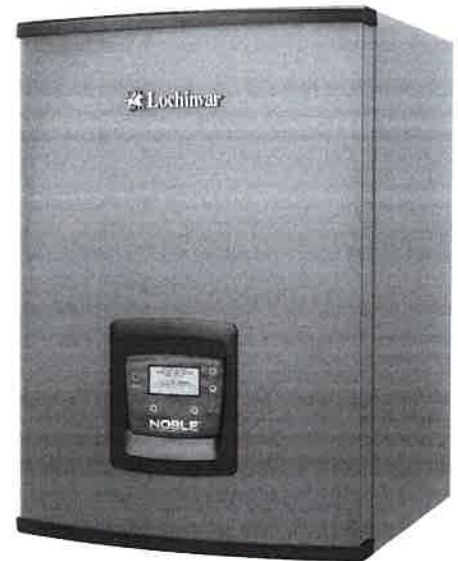
NOTES:

Smart Control™ Features

- » **SMART CONTROL Digital Operating Control**
LCD Display with words, not codes
- » **Outdoor Reset Control with Outdoor Air Sensor**
- » **Programmable System Efficiency Optimizers**
- » **Three Pump Control**
System Pump
Boiler Pump
DHW Pump
- » **High-Voltage Junction Box**
120 VAC / 60 Hertz / 1 Phase Power Supply
- » **Low Voltage Terminal Strip**
Flow Switch Contacts
Low-Water Cutoff Connection
System Sensor Contacts
Outdoor Air Sensor Contacts
Cascade Contacts
- » **Time Clock for Data Logging**
Last 10 Lockouts
- » **Low-Water Flow Safety Control & Indication**
- » **Password Security**
- » **Built-in Cascading Sequencer for up to 8 units**

Standard Features

- » **Modulating Burner with 10:1 Turndown**
Direct-Spark Ignition
Low-NOx Operation
- » **ASME Stainless Steel Heat Exchanger**
- » **Vertical & Horizontal Direct-Vent**
PVC, CPVC, Polypropylene or SS Venting up to 100 feet
- » **Condensate Trap**
- » **California Code Compliant**
- » **Other Features**
Automatic Reset High Limit
Adjustable High Limit w/Manual Reset
Wall-Mount Bracket
Zero Clearances to Combustible Materials
See Warranty for Details:
10 Year HEX Warranty
5 Year Parts Warranty



Optional Equipment

- Low-Water Cutoff w/Manual Reset & Test
- Concentric Vent Kit
- Condensate Neutralization Kit
- Sidewall Vent Termination
- Floor Stand
- Flow Switch
- Wireless Outdoor Sensor
- Nat to LP Gas Conversion Kit

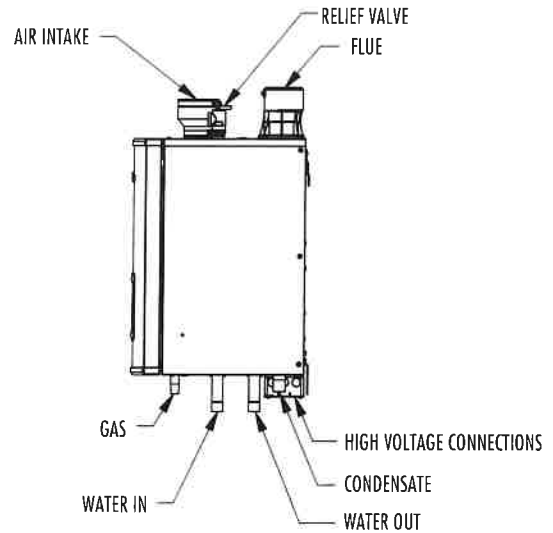
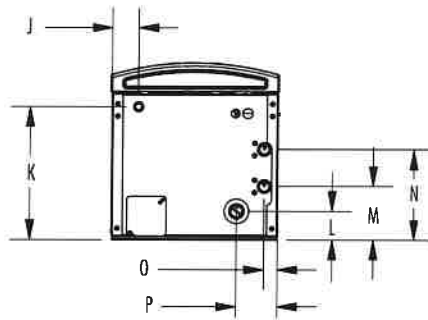
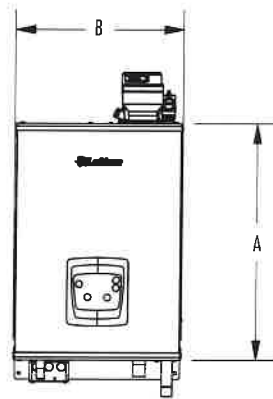
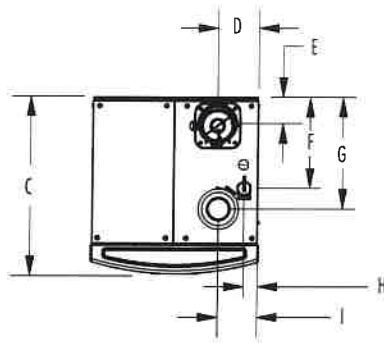
DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA

NOBLE

FIRE TUBE

DIMENSIONS & SPECIFICATIONS



Model Number	INPUT		AFUE %	Heating Capacity MBH	Net MBH	A	B	C	D	E	F	G	H
	Min MBH	Max MBH											
NKB080N	8.3	80	95.0	74	64	24"	17-1/4"	17-1/4"	2-1/4"	5-1/8"	8-1/2"	5-1/8"	1-1/2"
NKB110N	11	110	95.0	102	89	24"	17-1/4"	18"	2-3/4"	2-7/8"	9"	5-1/2"	2-7/8"
NKB150N	15.0	150	95.0	139	125	24"	17-1/4"	18"	4-1/2"	2-3/4"	9-1/8"	11-3/4"	4-1/2"
NKB199N	19.9	199	95.0	185	161	24"	17-1/4"	18"	4-1/8"	2-3/4"	9-3/8"	11-1/2"	4"

Model Number (continued)	I	J	K	L	M	N	O	P	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Wt. (lbs.)
NKB080N	1-1/2"	6-3/8"	12-5/8"	5-1/8"	4-5/8"	8-1/2"	1-1/2"	2-1/2"	1/2"	1"	2"	2"	120
NKB110N	2-7/8"	7-3/4"	13-1/8"	2-7/8"	5-1/2"	9"	2"	3"	1/2"	1"	3"	3"	126
NKB150N	4-1/2"	2-7/8"	13-1/8"	3"	5-3/8"	9-1/8"	1-7/8"	4-5/8"	1/2"	1"	3"	3"	132
NKB199N	4"	2-3/4"	13-1/2"	2-7/8"	5-1/2"	9-1/4"	1-3/8"	1-3/8"	1/2"	1"	3"	3"	140

NOTES:

- Information subject to change without notice. Change "N" to "L" for LP gas models.
- The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.
- The ratings have been determined under the provisions governing forced draft burners.
- Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.



Lochinvar, LLC
 300 Maddox Simpson Parkway
 Lebanon, Tennessee 37090
 P: 615.889.8900 / F: 615.547.1000
 Lochinvar.com





NOBLE® BOILER PRODUCT SUMMARY (NKB) 80,000-199,000 BTU/HR

	NKB080	NKB110	NKB150	NKB199
BOILER				
GALLON CAPACITY	1.2	1.4	2.0	2.7
HEATING SURFACE (SQ. FT.)	6.95	7.33	11.4	15.02
WATER CONNECTIONS	1"	1"	1"	1"
MAX. WORKING PRESSURE (PSI)	50	50	50	50
# OF RELIEF VALVES	1	1	1	1
RELIEF VALVE SIZE	3/4"	3/4"	3/4"	3/4"
RELIEF VALVE RATING (MBH)	535	535	535	535
RELIEF VALVE PRESSURE RATING (PSI)	30	30	30	30
GAS				
INLET CONNECTION	1/2"	1/2"	1/2"	1/2"
MAX. INLET PRESSURE, NAT	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.
MIN. INLET PRESSURE, NAT	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.
MAX. INLET PRESSURE, LP	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.
MIN. INLET PRESSURE, LP	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.
BTU/HR INPUT	80,000	110,000	150,000	199,000
BTU/HR OUTPUT (HIGH FIRE)	76,000	102,000	139,000	185,000
BTU/HR OUTPUT (LOW FIRE)	7,600	10,200	13,900	18,500
ELECTRICAL				
VOLTAGE/HEATER	120	120	120	120
VOLTAGE/CONTROL	24	24	24	24
TOTAL AMPS	0.7	0.7	0.7	0.9
# OF ELECTRICAL CONNECTIONS	1	1	1	1
DIMENSIONS				
HEIGHT	24"	24"	24"	24"
WIDTH	17-1/4"	17-1/4"	17-1/4"	17-1/4"
DEPTH	17-1/4"	18"	18"	18"
SERVICE CLEARANCES				
FRONT	24"	24"	24"	24"
BOTTOM	24"	24"	24"	24"
RIGHT SIDE	12"	12"	12"	12"
LEFT SIDE	12"	12"	12"	12"
TOP	6"	6"	6"	6"
DIRECT VENTING				
SIZE	2"	3"	3"	3"
VENT CATEGORY	IV	IV	IV	IV
VENT MATERIAL	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP

Lochinvar, LLC • 300 Maddox Simpson Pkwy • Lebanon, TN 37090 • 615-889-8900 / Fax: 615-547-1000

www.Lochinvar.com

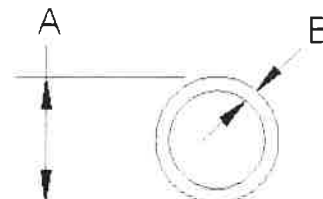
PRODUCT SUBMITTAL 102

RAUPEX O₂ barrier pipe



Product: RAUPEX® O₂ barrier pipe

Date: 11 February 2021 (supersedes 31 July 2019)



Article No.	Nominal Size in	Average OD A in (mm)	Minimum Wall Thickness B In (mm)	Weight lb/ft (kg/m)	Capacity gal/ft (l/m)
136008	3/8	0.500 (12.70)	0.070 (1.78)	0.05 (0.07)	0.0050 (0.0624)
136031	1/2	0.625 (15.88)	0.070 (1.78)	0.06 (0.08)	0.0098 (0.1222)
136880	5/8	0.750 (19.05)	0.083 (2.12)	0.08 (0.11)	0.0134 (0.1671)
136051	3/4	0.875 (22.22)	0.097 (2.47)	0.10 (0.15)	0.0189 (0.2356)
136011	1	1.125 (28.58)	0.125 (3.18)	0.17 (0.26)	0.0316 (0.3939)
136283	1 1/4	1.375 (34.92)	0.153 (3.88)	0.25 (0.37)	0.0467 (0.5827)
136293	1 1/2	1.625 (41.28)	0.181 (4.59)	0.35 (0.52)	0.0650 (0.8118)
136303	2	2.125 (53.98)	0.236 (6.00)	0.60 (0.90)	0.1114 (1.3906)

For updates to this publication, visit na.rehau.com/resourcecenter

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2021 REHAU

PRODUCT SUBMITTAL 102

RAUPEX O₂ barrier pipe



TECHNICAL DESCRIPTION

Specification	English	SI	Standard	Specification	English	SI	Standard
Minimum Density	58 lb/ft ³	926 kg/m ³	ASTM F876	Tensile Strength	4194-4355 psi @ 68°F	26-30 N/mm ² @ 20°C	--
Min. Degree of Crosslinking	70%	70%	ASTM F876		2610-2900 psi @ 176°F per ASTM D638	18-20 N/mm ² @ 80°C per ASTM D638	
Max. Thermal Conductivity	2.84 Btu in./(ft ² °F hr)	0.41 W/(m°K)	DIN 16892	Roughness	e=0.00028 in	e=0.007 mm	--
Coefficient of Linear Expansion	9.33X10 ⁻⁴ in/ft°F @ 68°F	0.14 mm/(m°C) @ 20°C	Mean @ 20-70°C per DIN 16892	Temperature Working Range	-40 to 200°F	-40 to 93°C	--
	1.33x10 ⁻³ in/ft°F @ 212°F	0.2 mm/(m°C) @ 100°C					
IZOD Impact Res.	No Break	No Break	--	O ₂ Permeability	--	<=0.32 mg/m ² /day @ 40°C	DIN 4726
Modulus of Elasticity	87,000-130,500 psi @ 68°F	600-900 N/mm ² @ 20°C	Minimum @ 20°C per DIN 16892	Max. Short-term Exposure	150 psig @ 210°F (48 hr)	1035 kPa @ 99°C (48 hr)	ASTM F876
	43,500-58,000 psi @ 176°F	300-400 N/mm ² @ 80°C					
				UV Resistance	See TB218		ASTM F2657

FUNCTIONAL DESCRIPTION

RAUPEX O₂ barrier pipe is manufactured using REHAU's high-pressure peroxide method for crosslinked polyethylene (PEXa). RAUPEX pipe meets or exceeds the requirements of ASTM F876, F877, NSF 61, CSA B137.5 and PPI TR-3. RAUPEX O₂ barrier pipe is SDR9, red in color and for use with the EVERLOC+[®] compression-sleeve system certified to ASTM F877, the REHAU F1960 cold expansion fitting system certified to ASTM F1960, and RAUPEX compression nut fittings. See REHAU *Technical Bulletin TB261* for other compatible PEX fitting systems. RAUPEX O₂ barrier pipe has a co-extruded oxygen diffusion barrier that exceeds the strict requirements of DIN 4726. RAUPEX pipe is manufactured by REHAU using a quality management system which has been certified to the latest version of ISO 9001.

LONG TERM STRENGTH

The maximum temperature and pressure ratings of the RAUPEX pipe are in accordance to ASTM F876, CSA B137.5 and PPI TR-3. The designer shall determine the actual conditions and apply the appropriate and additional design factors as required for any particular project. The temperature and pressure ratings apply to the application of RAUPEX pipe for conveying heating and cooling water at the 2.0 safety factor on allowable working pressure according to ASTM and CSA. According to the REHAU *PEXa Limited Warranty*, the RAUPEX pipe warranty period of 25 years is for operating conditions at or below 180°F (82.2°C) in permitted applications when the handling, use, installation and maintenance continually complies with all REHAU technical guidelines.

RAUPEX SDR9

maximum pressures and temperatures	design factors
160 psi @ 73.4°F (1055 kPa @ 23°C)	0.50 (per ASTM F876, CSA B137.5)
100 psi @ 180°F (690 kPa @ 82.2°C)	0.50 (per ASTM F876, CSA B137.5)
80 psi @ 200°F (550 kPa @ 93.3°C)*	0.50 (per ASTM F876, CSA B137.5)

* REHAU defines Elevated Temperature Applications as those with operating conditions greater than 180°F (82.2°C). When REHAU PEXa pipes are planned to be operated in Elevated Temperature Applications, contact REHAU Engineering to verify your project conditions comply with the REHAU *PEXa Limited Warranty* in accordance to REHAU *Technical Bulletin TB230 Elevated Temperature Applications*.

For updates to this publication, visit na.rehau.com/resourcecenter

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Before using, the user will determine suitability of the information for user's intended use and shall assume all risk and liability in connection therewith.

© 2021 REHAU