



City of Ketchum

January 3, 2023

Mayor Bradshaw and City Councilors
City of Ketchum
Ketchum, Idaho

Mayor Bradshaw and City Councilors:

Recommendation to Approve Mountain Land Design Showroom & Residences Amended FAR Exceedance Agreement 20491A and Right-of-Way Encroachment Agreement 22817

Recommendation and Summary

Staff recommends the Ketchum City Council approve the Mountain Land Design Showroom & Residences Amended FAR Exceedance Agreement 20491A and Right-of-Way (ROW) Encroachment Agreement 22817 and adopt the following motions:

- “I move to authorize the Mayor to sign the Mountain Land Design Showroom & Residences Project Amended FAR Exceedance Agreement 20491A with 360 Views LLC.”
- “I move to authorize the Mayor to sign 111 N Washington Ave (Mountain Land Design Showroom & Residences Project) ROW Encroachment Agreement 22817 with 360 Views LLC.”

The reasons for the recommendation are as follows:

- The Planning and Zoning Commission reviewed proposed modifications to the project plans approved for the Mountain Land Design Showroom & Residences Project (Design Review Amendment Application File No. P20-027A) during their regular meeting on May 24th, 2022. The proposed changes included exterior and interior modifications. The interior modifications proposed to combine two residential units on the second floor into one dwelling unit. No changes were proposed to the community housing contribution for the project.
- The Planning and Zoning Commission approved the modifications to Mountain Land Design Showroom & Residences Project (Design Review Amendment Application File No. P20-27A) with the condition that the amended FAR Exceedance Agreement be revised to reflect the modified project and review and approved by the Ketchum City Council.
- The project requires a ROW Encroachment Permit for new heated, paver sidewalks installed along 1st Street and Washington Avenue as well as metal awnings that overhang 2.5 feet into the public ROW along 1st Street. The proposed right-of-way improvements have been reviewed and approved by City Departments, including the City Engineer.

Introduction and History

The Planning and Zoning Commission reviewed and approved Design Review Application File No. P20-027 for the Mountain Land Design Showroom & Residences project on June 8th, 2020. The project located at 111 N Washington Avenue within the Mixed-Use Subdistrict of the Community Core (CC-2

Zone). The new mixed-use building was issued a building permit (Application File No. B20-060) on August 3rd, 2020 and is currently under construction.

The Planning and Zoning Commission reviewed proposed modifications to the project plans approved for the Mountain Land Design Showroom & Residences project (Design Review Amendment Application File No. P20-027A) during their regular meeting on May 24th, 2022. The proposed changes included exterior and interior modifications. The interior modifications proposed to combine two residential units on the second floor into one dwelling unit. No changes were proposed to the community housing contribution for the project.

Analysis

Amended FAR Exceedance Agreement 20491A

The Ketchum City Council approved the Mountain Land Design Showroom & Residences Floor Area Ratio (FAR) Exceedance Agreement 20491 on July 20th, 2021. FAR Exceedance Agreement 20491 memorialized the applicant's community housing contribution in exchange for the FAR increase and approved a 978-square-foot community housing rental unit with an associated 59 square-foot storage area within the basement of the new mixed-use building targeted for Blaine County Housing Authority (BCHA) Income Category 4. In addition to approving the applicant's community housing contribution, the FAR Exceedance Agreement memorialized the approved project, including not only the size of the mixed-use building but also its mixture of retail and multi-family residential units.

The Planning and Zoning Commission approved the modifications proposed with Design Review Amendment Application File No. P20-27A with the condition that the FAR Exceedance Agreement be amended to reflect the modified project and review and approved by the Ketchum City Council. No changes are proposed to the applicant's community housing contribution. Amended FAR Exceedance Agreement 20491A revises the agreement to reflect the modified project. Amended FAR Exceedance Agreement 20491A is included as Attachment A to the Staff Report.

Right-of-Way Encroachment Agreement 22817

The project requires a ROW Encroachment Permit for the new 8-foot-wide, heated paver sidewalks installed along Washington Avenue and 1st Street as well as metal awnings that overhang 2.5 feet into the public ROW along 1st Street. The proposed right-of-way improvements have been reviewed and approved by City Departments, including the City Engineer. Right-of-Way Encroachment Agreement 22817 for the new heated paver sidewalks and metal awning overhangs is included as Attachment B to the Staff Report.

Pursuant to Ketchum Municipal Code §12.12.040.C, a Right-of-Way Encroachment Permit is required for any permanent fixture to the ground or a building is installed in the public right-of-way. 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.

Permanent encroachments within the right-of-way must be in the public interest pursuant to Ketchum Municipal Code §12.12.060.A. The proposed encroachments are in the public interest because the snowmelt system will prevent the accumulation of snow and ice on the sidewalks along Washington Avenue and 1st Street and will maintain safe pedestrian access during winter. The improvements will not impact the use or operation of the street, decrease the number of on-street parking spaces, or impact drainage or snow removal along Washington Avenue or 1st Street. The heated sidewalk system meets the City's energy efficiency requirements for snowmelt systems installed within the public rights-of-way in downtown Ketchum.

Sustainability

The project does not limit the ability of the city to reach the goals of the Ketchum Sustainability Action Plan – 2020. The project has been designed to meet all standards specified in the 2018 International Energy Conservation Code and the City of Ketchum's Green Building Codes provided in Chapter 15.20 of Ketchum Municipal Code. The proposed snowmelt system as specified in Exhibit A of Right-of-Way Encroachment Agreement 22817 (Attachment B) meets the City's snowmelt requirements for commercial projects.

Financial Impact

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

Attachments

- A. Mountain Land Design Showroom & Residences Amended FAR Exceedance Agreement 20491A
- B. 111 N Washington Avenue Right-of-Way Encroachment Agreement 22817

Attachment A
Mountain Land Design
Showroom & Residences
Amended FAR Exceedance
Agreement 20491A

**FAR EXCEEDANCE
AGREEMENT #20491A**

Parties:

City of Ketchum	"City"	P.O. Box 2315, 191 5 th Street W, Ketchum, Idaho 83340
360 Views LLC	"Developer"	Mailing: 2345 S Main Street, South Salt Lake, Utah 84115 Subject Property: 111 N Washington Avenue (Ketchum Townsite: Block 39: Lot 4)

This FAR Exceedance Agreement ("Agreement") is made between the City of Ketchum, a municipal corporation of the state of Idaho ("City"), and 360 Views LLC, a limited liability corporation, owner of the subject property and developer of the project ("Developer").

RECITALS

- A. Pursuant to the City's authority under the Idaho Local Land Use Planning Act, the Ketchum Municipal Code ("K.M.C.") Chapter 17.124 provides for certain development standards, including maximum floor area ratio (FAR) standards under K.M.C. 17.124.040 - Floor Area Ratios and Community Housing. These standards are intended to protect the public interest, health, general welfare, and provision of public services. The City has provided options for development proposals to potentially exceed the allowable FAR in exchange for mitigation of the impacts of such larger development, particularly as focused on affordable community and workforce housing. K.M.C. 17.124.040(B).
- B. Litigation was brought challenging the constitutionality and legality of the City's FAR standards in relation to the inclusionary housing incentive under K.M.C. 17.124.040 that was voluntarily dismissed.
- C. The City has adopted Resolution 17-006 which provides for the Parties to proceed with the FAR standards and options under K.M.C. 17.124.040, so long as the Parties voluntarily opt into a FAR Exceedance Agreement, making clear they are voluntarily opting by contract into use of such FAR standards and mitigation measures and are waiving any claims or demands related to any legal challenge to K.M.C. 17.124.040.

THEREFORE, in consideration of the mutual agreement herein contained and subject to the terms and conditions stated, it is hereby understood and agreed by the Parties as follows:

- 1. **Attestation of Developer.** Developer, by this Agreement, attests that the City has disclosed potential litigation challenging K.M.C. 17.124. Developer desires to voluntarily proceed on the development proposal, including proposal of exceedance of FAR

standards and accompanying mitigation measures, using the approach and standards as set forth in K.M.C. 17.124.

2. **Waiver and Release of Claims.** Developer, by this Agreement, waives and releases any claims, demands, challenges, claims for reimbursement or refund, and/or damages now or in the future deriving from or relying on the outcome of future litigation substantially challenging the validity of K.M.C. 17.124 and its standards. It is Developer's intent to accept and proceed with such standards as outlined in K.M.C. 17.124 for Developer's development plan for purposes of allowable FAR and Developer voluntarily and knowingly accepts the mitigation measures as proposed.
3. **FAR Exceedance Consideration.** In consideration for Developer's attestation and waiver, the City agrees to consider their exceedance proposal and will currently consider and evaluate Developer's proposed FAR exceedance and accompanying mitigation measures within the framework and standards of K.M.C. 17.124.040, attached hereto as Exhibit A and made a part of this Agreement.
4. **Maximum FAR and Mitigation.** The Parties hereby agree to an allowable maximum floor area ratio and accompanying mitigation measures as set forth in Exhibit B, attached hereto and made a part of this Agreement.
5. **Withdrawal.** Developer may withdraw from this Agreement upon thirty days notice to City provided that Developer has not commenced building and has received no benefit from a maximum FAR exceedance. Withdrawal shall cause an immediate reversion to the permitted gross FAR as set forth in Exhibit A: K.M.C. 17.124.040(A) at the time of this Agreement.
6. **Amendments.** This Agreement may not be amended, modified, altered or changed in any respect whatsoever, except by further agreement in writing duly executed by the parties.
7. **No Assignment.** Developer shall not sell, assign, or transfer all or any portion of its interest in this Agreement at any time without consent of the City.
8. **Binding Effect.** This Agreement shall be binding upon the heirs, estates, personal representatives, successors, and assigns of the parties.
9. **Attorney Fees and Costs.** In the event any action is brought to enforce this Agreement, the prevailing party is entitled to an award of reasonable attorney fees and costs.
10. **Notices.** Any notice under this Agreement shall be in writing and shall be treated as duly delivered if the same is personally delivered or deposited in the United States mail,

certified, return receipt requested, postage prepaid, and properly addressed to the contacts as specified at the beginning of this Agreement.

11. **Partial Invalidity.** Whenever possible, each provision of this Agreement shall be interpreted in such a way as to be effective and valid under applicable law. If a provision of this Agreement is prohibited by or invalid under applicable law, it shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

12. **Waiver:** The rights and remedies of the parties to this Agreement are cumulative and not alternative. Neither the failure nor any delay by any party in exercising any right, power, or privilege under this Agreement or the documents referenced in this Agreement will operate as a waiver of such right, power, or privilege, and no single or partial exercise of any such right, power, or privilege will preclude any other or further exercise of such right, power, or privilege or the exercise of any other right, power, or privilege.

13. **Execution and Counterparts:** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original agreement, but all of which shall be considered one instrument.

DATED THIS ____ DAY OF JANUARY, 2023.

Developer

City of Ketchum, Idaho

Dan Devenport
Managing Member
360 Views LLC

Neil Bradshaw, Mayor

Attest:

Trent Donat, City Clerk

Exhibit B

FAR EXCEEDANCE AGREEMENT COMPLIANCE

PROJECT: Mountain Land Design Showroom & Residences

APPLICATION FILE NUMBERS: Design Review P20-027, Design Review Amendment P20-027A, Building Permit B20-060

DEVELOPER & PROPERTY OWNER: 360 Views LLC (Dan Devenport)

LOCATION: 111 N Washington Ave (Ketchum Townsite: Block 39: Lot 4)

ZONING: Mixed-Use Subdistrict of the Community Core (CC-2)

BACKGROUND:

1. The Planning and Zoning Commission approved the Design Review application (P20-027) for the Mountain Land Design Showroom & Residences project on May 19th, 2020 for the construction of a new mixed-use building located at the northwest corner of Washington Avenue and 1st Street.
2. The project site is located at 111 N Washington Ave (Ketchum Townsite: Block 39: Lot 4) within the Mixed-Use Subdistrict of the Community Core (CC-2). The subject corner lot has an area of 5,500 sq ft, which conforms to the minimum area required for lots in the CC-2 Zone.
3. Pursuant to the definition of gross floor area (KMC §17.08.020), four parking stalls for developments on single Ketchum Townsite lots of 5,600 sq ft or less are not included in the gross floor area calculation.
4. With the parking stall discount, the mixed-use building has a proposed Floor Area Ratio (FAR) of 2.08 (11,422 sq ft/5,500 sq ft lot area).
5. The Ketchum City Council approved Floor Area Ratio (FAR) Exceedance Agreement Contract #20491 on July 20th, 2021. FAR Exceedance Agreement 20491 memorialized the applicant's community housing contribution in exchange for the FAR increase and approved a 978-square-foot community housing rental unit and associated 59 square-foot storage area within the basement of the new mixed-use building targeted for Blaine County Housing Authority (BCHA) Income Category 4.
6. The project was issued a building permit (Application File No. B20-060) on August 3rd, 2020 and is currently under construction.
7. The Planning and Zoning Commission reviewed proposed modifications to the project plans approved for the Mountain Land Design Showroom & Residences Project (Design Review Amendment Application File No. P20-027A) during their regular meeting on May 24th, 2022. The proposed changes included exterior and interior modifications, including modifying the

configuration of uses within the mixed-use building. The interior modifications proposed to combine 2 residential units on the second floor into one dwelling unit. No changes were proposed to the community housing contribution for the project.

8. The Planning and Zoning Commission approved the modifications to Mountain Land Design Showroom & Residences Project (Design Review Amendment Application File No. P20-27A) with the condition that the amended FAR Exceedance Agreement be revised to reflect the modified project and approved by the Ketchum City.

EXCEEDANCE ANALYSIS

Floor Area Ratios and Community Housing (Ketchum Municipal Code §17.124.040)

Permitted Gross FAR in Community Core Subdistrict 2(CC-2) : 1.0

Permitted Gross FAR with Inclusionary Housing Incentive: 2.25

Mountain Land Design Showroom & Residences Proposed Gross Floor Area: 12,070 gross square feet

Pursuant to the definition of gross floor area (KMC §17.08.020), four parking stalls for developments on single Ketchum Townsite lots of 5,600 sq ft or less are not included in the gross floor area calculation. Four parking stalls 9' x 18' in size (648 square-feet total) have been deducted from the Gross Floor Area total square footage.

Gross Floor Area with Parking Discount: 11,422 gross square feet

Lot Area: 5,500 square feet

FAR Proposed: 2.08 (11,422 sq ft/5,500 sq ft lot area)

Increase Above Permitted FAR: 5,922 square feet

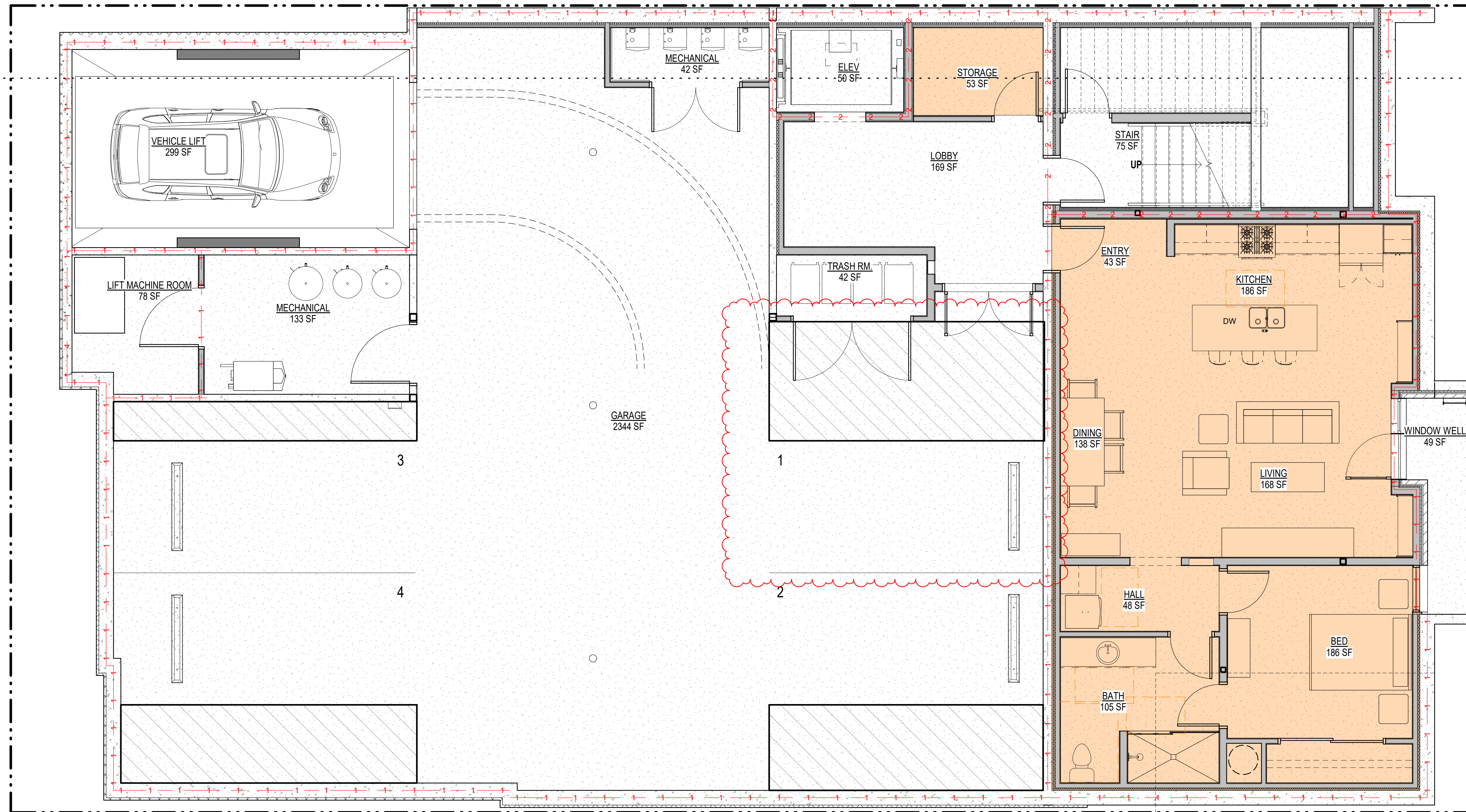
20% of Increase: 1,184 square feet

Net Livable (15% Reduction): 1,007 square feet

Mountain Land Design Showroom & Residences Community Housing Contribution Proposal

The applicant proposes to:

1. Provide one 978-square-foot community housing unit with an associated 59-square-foot storage area within the basement of the mixed-use building as shown on the attached basement floor plan. The combined floor area of the community housing unit and storage area will be 1,037 square feet.
2. Target subject community housing unit for Blaine County Housing Authority (BCHA) Income Category 4 or lower. The tenant chosen to occupy the unit shall be selected from the BCHA database of qualified households.
3. The deed covenant for the community housing unit shall be recorded prior to issuance of a Certificate of Occupancy for the project.
4. The community housing unit shall be listed for rent through BCHA concurrent with the issuance of a Certificate of Occupancy by the City for the project.

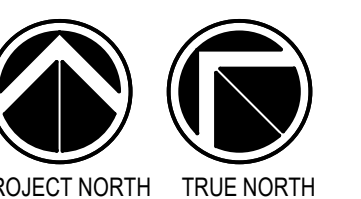


WORKFORCE UNIT: 978 SF
 STORAGE: 53 SF
 TOTAL WORKFORCE UNIT: 1,031
 (1,013 SF OWED PER 2.08 FAR)

GROSS FLOOR AREA: 4,528 SF
 NET FLOOR AREA: 831 SF

PROPOSED BASEMENT FLOOR PLAN

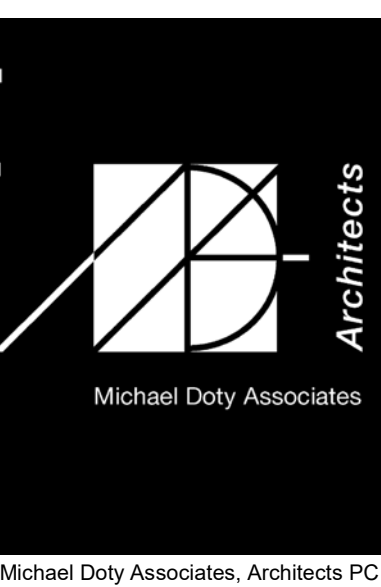
1 2 4 8 1/4" = 1'-0"



MOUNTAIN LAND DESIGN SHOWROOM AND RESIDENCES

111 NORTH WASHINGTON AVENUE
 KETCHUM, IDAHO

2/28/2022 REVISION
 5/19/2020



© Michael Doty Associates, Architects PC

Attachment B
111 N Washington Avenue
Right-of-Way Encroachment
Agreement 22817

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 22817

THIS AGREEMENT, made and entered into this ____ day of January, 2023, by and between the CITY OF KETCHUM, IDAHO, a municipal corporation ("Ketchum"), whose address is Post Office Box 2315, Ketchum, Idaho 83349 and DAN DEVENPORT, representing 360 VIEWS LCC, (collectively referred to as "Owner"), whose address is 2345 S Main Street, South Salt Lake, Utah 84115.

RECITALS

WHEREAS, Owner is the owner of real property described as 111 N Washington Avenue ("Subject Property"), located within the City of Ketchum, State of Idaho; and

WHEREAS, Owner wishes to permit placement of pavers sidewalks with a hydronic snowmelt system within the public rights-of-way along Washington Avenue and 1st Street and metal awnings that overhang into the public right-of-way along 1st Street for the Mountain Land Design Showroom & Residences Project. 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 paver sidewalks with a hydronic snowmelt system and metal awning overhangs identified in Exhibit "A" within the public right-of-way on Washington Avenue and 1st Street 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: _____
Dan Devenport
360 Views LLC
Its: Managing Member

By: _____
Neil Bradshaw
Its: Mayor

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

On this ___ day of _____, 2023, before me, the undersigned Notary Public in and for said State, personally appeared DAN DEVENPORT, known to me to be the Manager of 360 VIEWS LLC and the 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)
County of Blaine) ss.
)

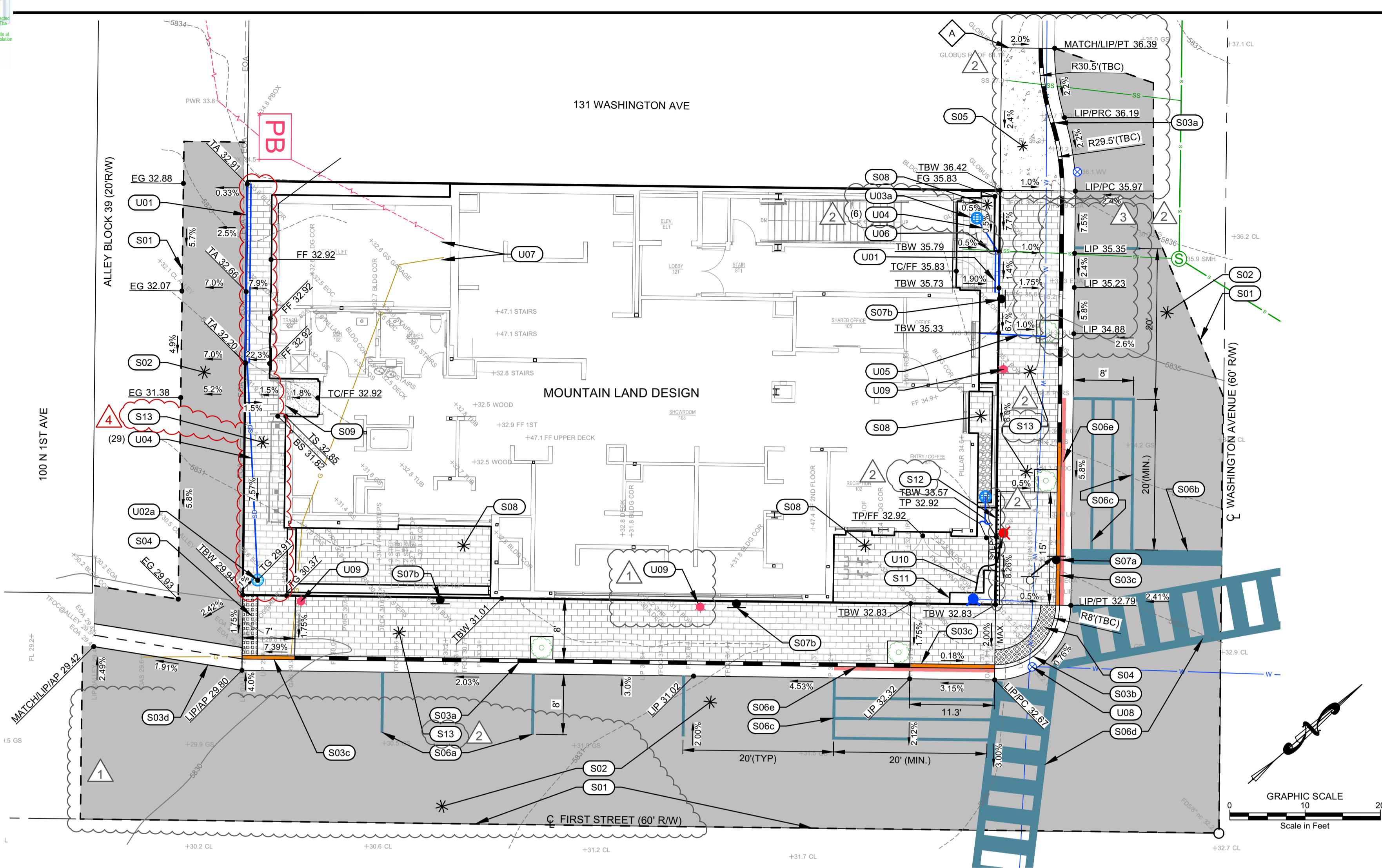
On this ___ day of _____, 2023, before me, the undersigned Notary Public in and for said State, personally appeared NEIL BRADSHAW, known or identified to me to be the Mayor of the CITY OF KETCHUM, IDAHO, and the person who executed the foregoing instrument on behalf of said municipal corporation and 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.

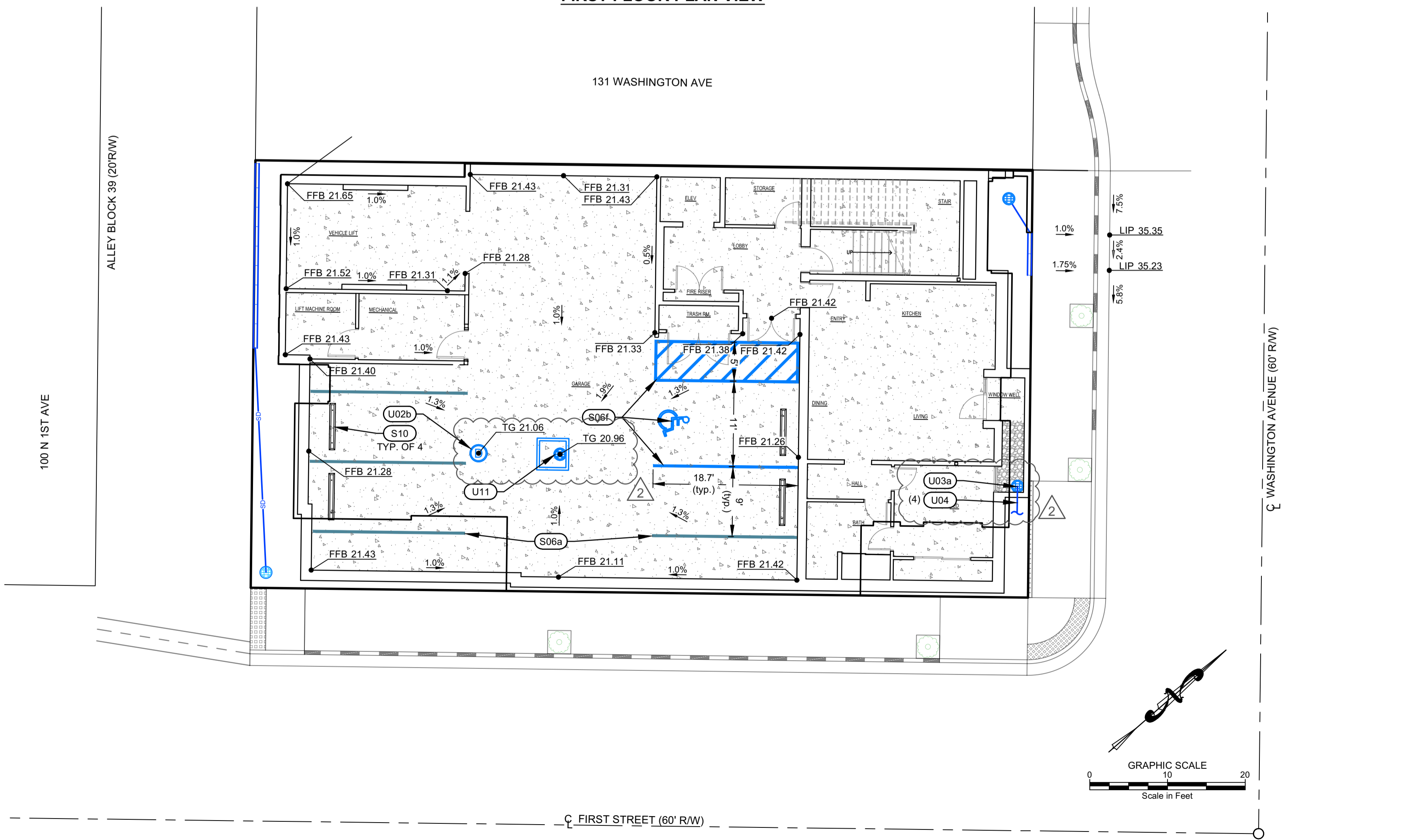
Notary Public for _____
Residing at _____
Commission expires _____

EXHIBIT "A"

City of Ketchum
 Approved
 BLD2007-0004
 09/23/20



FIRST FLOOR PLAN VIEW



BASEMENT PLAN VIEW

CONSTRUCTION KEYNOTES

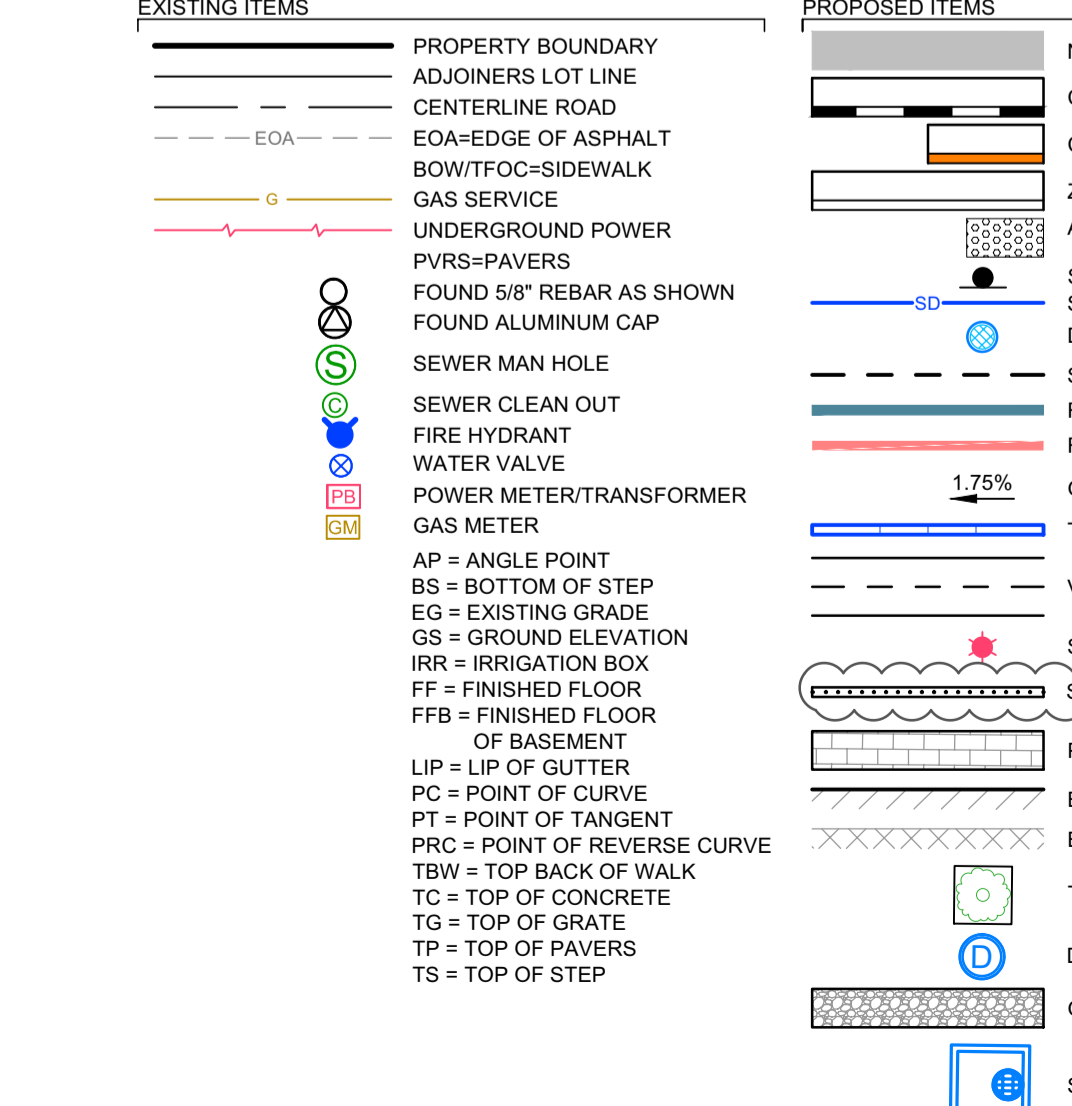
SITE IMPROVEMENTS

- S01 SAWCUT EXISTING ASPHALT TO PROVIDE FOR A CLEAN VERTICAL EDGE.
- S02 CONSTRUCT/REPAIR ASPHALT SEE DETAIL 1, SHEET C2.0.
- S03 CONSTRUCT CONCRETE CURB
 - a. 6" CONCRETE VERTICAL CURB AND GUTTER PER DETAIL 4, SHEET C2.0.
 - b. ZERO REVEAL CURB AND GUTTER PER DETAIL 3, SHEET C2.0.
 - c. CURB TRANSITION PER DETAIL 3, SHEET C2.0 [(typ.)].
 - d. 3" WIDE CONCRETE VALLEY GUTTER PER DETAIL 7, SHEET C2.0.
- S04 INSTALL TRUNCATED DOME DETECTABLE WARNING INSERT. SEE DETAILS 10 & 12, SHEET C2.0.
- S05 CONSTRUCT CONCRETE SIDEWALK, WIDTH AS SHOWN HEREON. SEE DETAIL 2, SHEET C2.0.
- S06 INSTALL PAVEMENT MARKINGS PER CITY OF KETCHUM STANDARDS
 - a. 4" WIDE YELLOW PARKING STRIPE
 - b. 24" WIDE WHITE STOP BAR
 - c. 4" WIDE YELLOW NO-PARKING STRIPE
 - d. WHITE CROSSWALK STRIPING (MATCH CITY PATTERNS)
 - e. NO PARKING ZONE (RED CURB)
 - f. 4" WIDE ADA STRIPING AND SYMBOL
- S07 INSTALL SIGNS, CITY WILL PROVIDE SIGN BASES. SEE DETAIL 9, SHEET C2.0 FOR SIGN BASE DETAIL.
 - a. RELOCATE STOP/STREET SIGN.
 - b. REGULATORY SIGN, COORDINATE TYPE AND FINAL LOCATION WITH CITY OF KETCHUM.
- S08 INSTALL PAVERS PER ARCHITECTURAL PLANS.
- S09 CONSTRUCT CONCRETE STAIRS WITH HANDRAILS. SEE ARCHITECTURAL PLANS.
- S10 CONCRETE CURB STOP PER ARCHITECTURAL PLANS.
- S11 CONCRETE SEAT WALL PER ARCHITECTURAL PLANS.
- S12 STEEL EDGING PER ARCHITECTURAL PLANS.
- S13 INSTALL HEATED PAVER SIDEWALK PER DETAIL 13, SHEET C2.0. COORDINATE WITH MECHANICAL ENGINEER AND/OR PLUMBER FOR HEATING SOURCE.

UTILITY IMPROVEMENTS

- U01 TRENCH DRAIN WITH HEAT TAPE. SEE LANDSCAPE ARCHITECT DRAWINGS FOR DETAIL. INSTALL PER MANUFACTURERS SPECIFICATIONS.
- U02 INSTALL DRYWELL PER DETAIL 6, SHEET C2.0. CONNECT ROOF DRAINS PER ARCH.
 - a. RIM ELEV = 5829.91 (ROUND GRATE)
I.E. (IN) = 5826.91
RIM ELEV = 5821.06 (SOLID LID)
I.E. (IN) = 5818.3
 - b. RIM ELEV = 5835.83 (ROUND GRATE)
I.E. (IN) = 5833.33
BOTTOM OF DRYWELL PIPE = 5829.83
RIM ELEV = 5821.1 (ROUND GRATE)
I.E. (OUT) = 5819.1, OUTLET TO FOUNDATION DRAIN ROCK
BOTTOM OF DRYWELL PIPE = 5818.1
- U03 INSTALL DRYWELL PER DETAIL 8, SHEET C2.0.
 - a. RIM ELEV = 5835.83 (ROUND GRATE)
I.E. (IN) = 5833.33
BOTTOM OF DRYWELL PIPE = 5829.83
RIM ELEV = 5821.1 (ROUND GRATE)
I.E. (OUT) = 5819.1, OUTLET TO FOUNDATION DRAIN ROCK
BOTTOM OF DRYWELL PIPE = 5818.1
- U04 INSTALL 6" Ø D3034 PVC PIPE @ S=2.0% MIN. 3.0' MINIMUM COVER.
- U05 CUT, CAP, AND REMOVE EXISTING SERVICE AT WATER MAIN. INSTALL NEW WATER SERVICE. NEW SERVICE SIZE TO BE DETERMINED BY PLUMBING ENGINEER.
- U06 RETAIN, PROTECT, UTILIZE EXISTING 4" Ø SEWER SERVICE.
- U07 RELOCATE DRY UTILITIES PER ARCHITECTURAL PLANS.
- U08 RELOCATE VALVE OUT OF ZERO REVEAL CURB AND GUTTER. COORDINATE WORK WITH CITY OF KETCHUM WATER DEPARTMENT.
- U09 INSTALL STREET LIGHT PER CITY OF KETCHUM STANDARDS. APPROXIMATE LOCATION SHOWN.
- U10 RELOCATE FIRE HYDRANT. COORDINATE WORK WITH CITY OF KETCHUM WATER DEPARTMENT.
- U11 INSTALL CONCRETE 350 GALLON SAND AND GREASE TRAP WITH TRAFFIC RATED LID. SEE DETAIL 11 / C2.0.
RIM = 20.96
I.E. (OUT) = 18.46

LEGEND



CONSTRUCTION NOTES

1. 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.
2. 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.
3. 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.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
5. 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.
6. 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.
7. ALL WATER SUPPLY FIXTURES, FITTINGS, PIPING, AND ALL RELATED APPURTENANCES SHALL BE ANSINFSF STD. 81 COMPLIANT.
8. 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%.
9. THE CONTRACTOR SHALL USE ANSINFSF STANDARD 60 CHEMICALS AND COMPOUNDS DURING INSTALLATION & DISINFECTION OF POTABLE WATER MAIN.
10. CONTRACTOR SHALL COORDINATE LOCATIONS OF DRY UTILITY FACILITIES (POWER, CABLE, PHONE, TV) NOT SHOWN ON THE DRAWING WITH IDAHO POWER.
11. ALL CLEARING & GRUBBING SHALL CONFORM TO ISPCW SECTION 201.
12. 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 ITD T-91.
13. 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.
14. 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 ITD T-91.
15. 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 803B IN ISPCW SECTION 803. ASPHALT BINDER SHALL BE PG 58-28 CONFORMING TO TABLE A-1 IN ISPCW SECTION 805.
16. 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.
17. 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).
18. ALL CONCRETE FORM WORK 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.
19. 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.
20. TOPOGRAPHIC, SITE, AND BOUNDARY SURVEYS SHOWN HEREON WERE CONDUCTED BY ALPINE ENTERPRISES INC.
21. 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.

111 N WASHINGTON AVE.
 A SITE, GRADING, DRAINAGE, AND UTILITY PLAN FOR
 LOCATED WITHIN SECTION 18, T.4 N., R.18 E., B.M., CITY OF KETCHUM, BLAINE COUNTY, IDAHO
 PREPARED FOR 360 VIEWS, LLC

DESIGNED BY: [Signature]
 SCS: [Signature]
 SKE: [Signature]
 SNE: [Signature]
 CHECKED BY: [Signature]

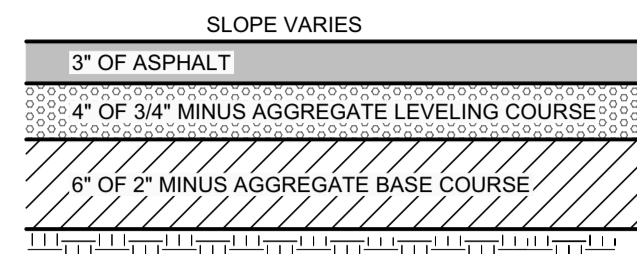
REUSE OF DRAWINGS:
 This drawing shall not be used for any project or extension of this project except by agreement in writing with Galena Engineering, Inc.

GALENA ENGINEERING, INC.
 Civil Engineers & Land Surveyors
 317 N. River Street
 Hailey, Idaho 83433
 (208) 788-1705
 (208) 788-4612 fax
 email galena@galena-engineering.com

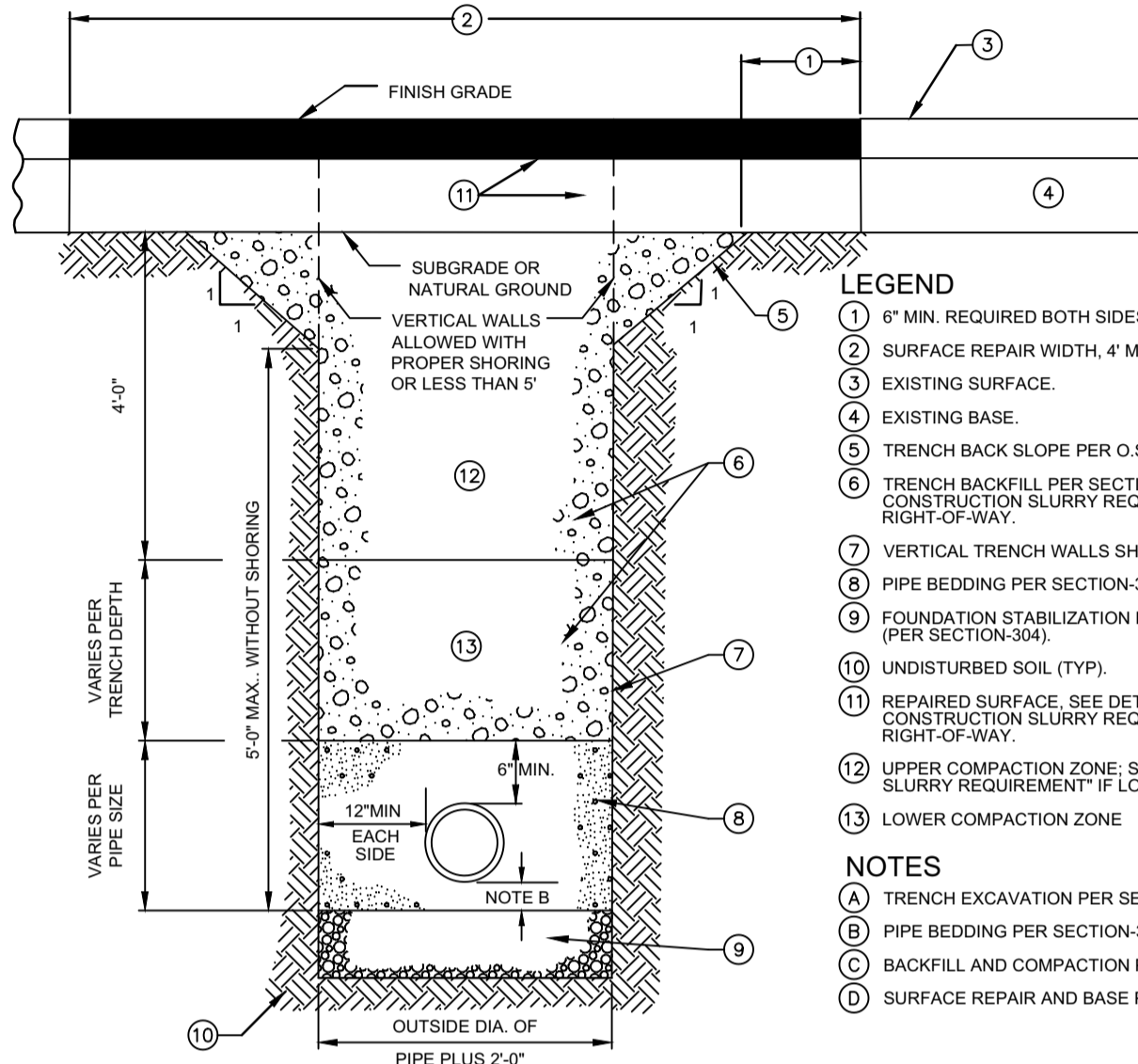
NO.	DATE	BY	ISSUE FOR PERMIT	REVISIONS
1	06/26/20	SKS	ISSUE FOR PERMIT	
2	07/17/20	SKS	PERMIT REVISIONS 7/17/2020	
3	09/18/21	SKS	HEATED PAVER SIDEWALK IN RIGHT-OF-WAY	
4	11/09/21	SKS	WASHINGTON AVE GRADING ADJUSTMENT	
5	01/17/22	SKS	ALLEY FRONTAGE (PRIVATE) MATERIAL CHANGE	

C1.0

PROFESSIONAL ENGINEER
 REGISTERED
 12497
 08/01/22
 STATE OF IDAHO
 SEAN M. FLYNN



1
 C2.0
TYPICAL ASPHALT SECTION
 N.T.S.



- LEGEND**
- 1/8" MIN. REQUIRED BOTH SIDES, SAWCUT REQUIRED.
 - SURFACE REPAIR WIDTH, 4" MINIMUM.
 - EXISTING SURFACE.
 - EXISTING BASE.
 - TRENCH BACK SLOPE PER O.S.H.A. OR SUITABLE SHORING.
 - TRENCH BACKFILL PER SECTION-306, OR SEE "KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT" IF LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
 - VERTICAL TRENCH WALLS SHORING PER O.S.H.A.
 - PIPE BEDDING PER SECTION-305 (SEE SD-302).
 - FOUNDATION STABILIZATION MAY VARY PER SOIL TYPE AND STABILITY (PER SECTION-304).
 - UNDISTURBED SOIL (TYP).
 - REPAIRED SURFACE. SEE DETAILS 1 AND 2. SEE "KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT" IF LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
 - UPPER COMPACTION ZONE. SEE "KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT" IF LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
 - LOWER COMPACTION ZONE.
- NOTES**
- TRENCH EXCAVATION PER SECTION-301.
 - PIPE BEDDING PER SECTION-305.
 - BACKFILL AND COMPACTION PER SECTION-306.
 - SURFACE REPAIR AND BASE PER DETAIL 3C20

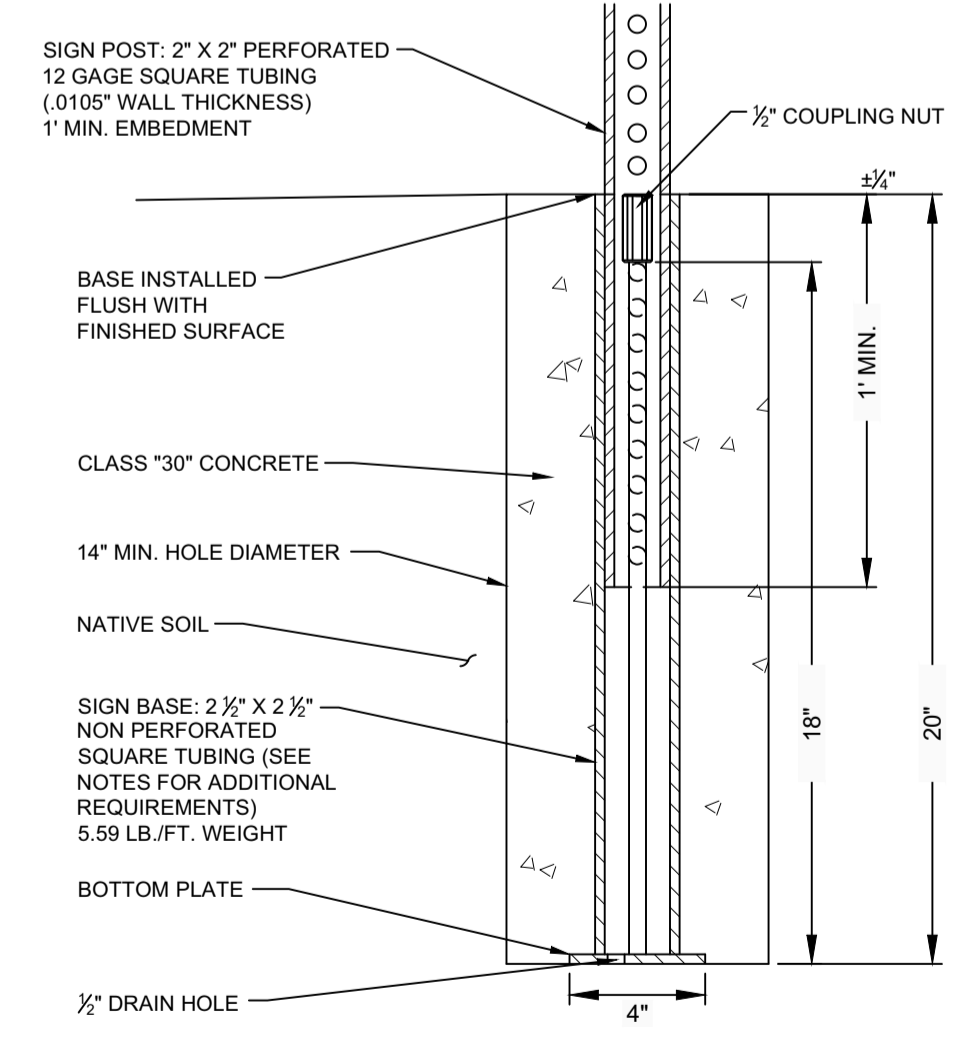
KETCHUM PUBLIC CONSTRUCTION SLURRY REQUIREMENT
 IN AREAS WHERE IT IS NECESSARY TO CUT THE ASPHALT PAVEMENT AND DIG A TRENCH FOR BURIAL OF CONDUIT CABLE OR OTHER CITY UTILITY, THE TRENCH SHALL BE BACKFILLED WITH A LEAN CONCRETE MIX TO THE BOTTOM OF FINISH SURFACE MATERIAL WITH THE FOLLOWING PROPORTIONS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

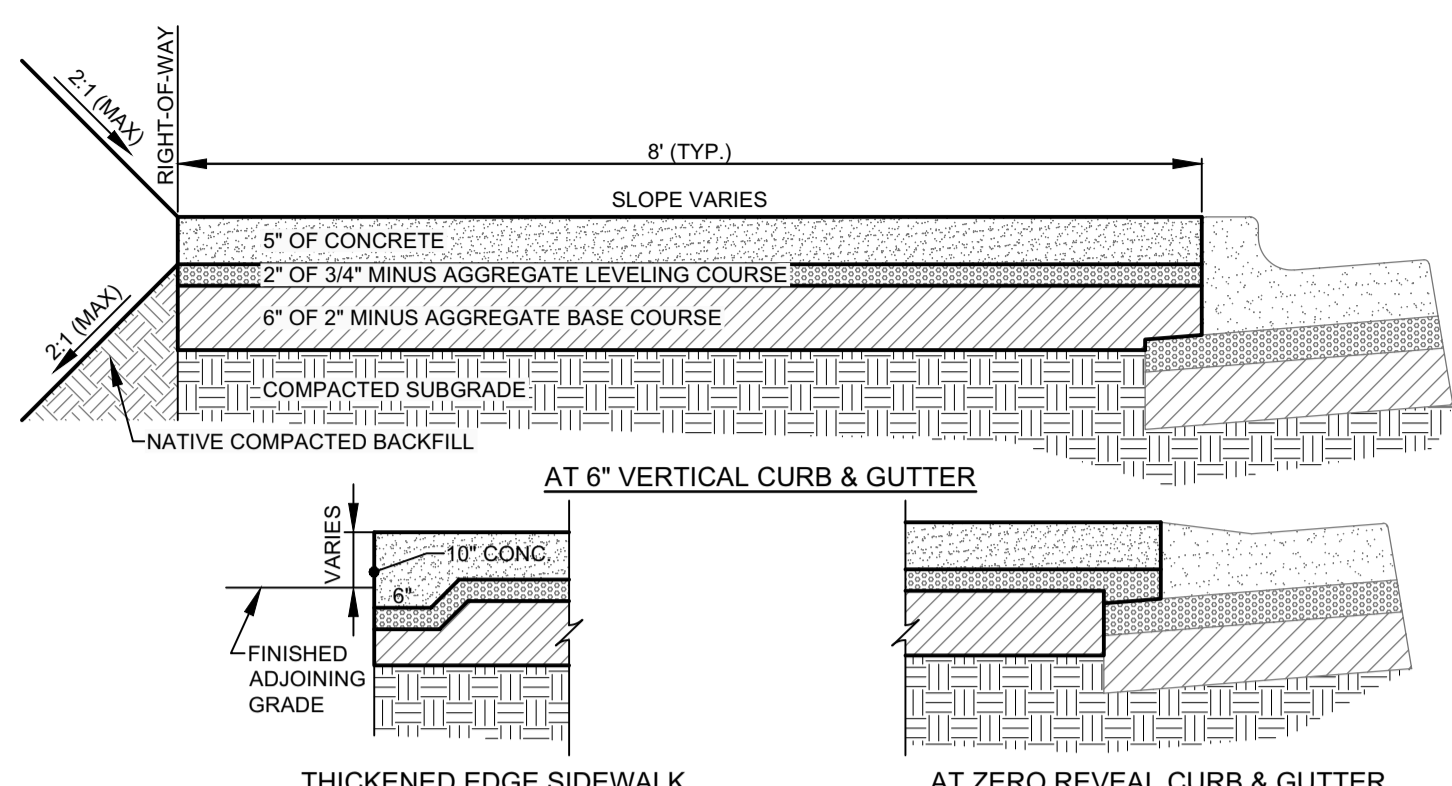
NO COMPACTION, VIBRATION OR FINISHING IS REQUIRED. THE LEAN CONCRETE MIX SHALL BE STRUCK OFF AT OR BELOW THE ELEVATION OF THE PLANT MIX SURFACING WITH A SQUARE NOSE SHOVEL OR SIMILAR HAND TOOL. THE BACKFILL MIX SHALL BE ALLOWED TO SET FOR A MINIMUM OF 2 HOURS BEFORE THE PERMANENT PLANT MIX SURFACING 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.

5
 C2.0
TYPICAL TRENCH SECTION
 N.T.S.

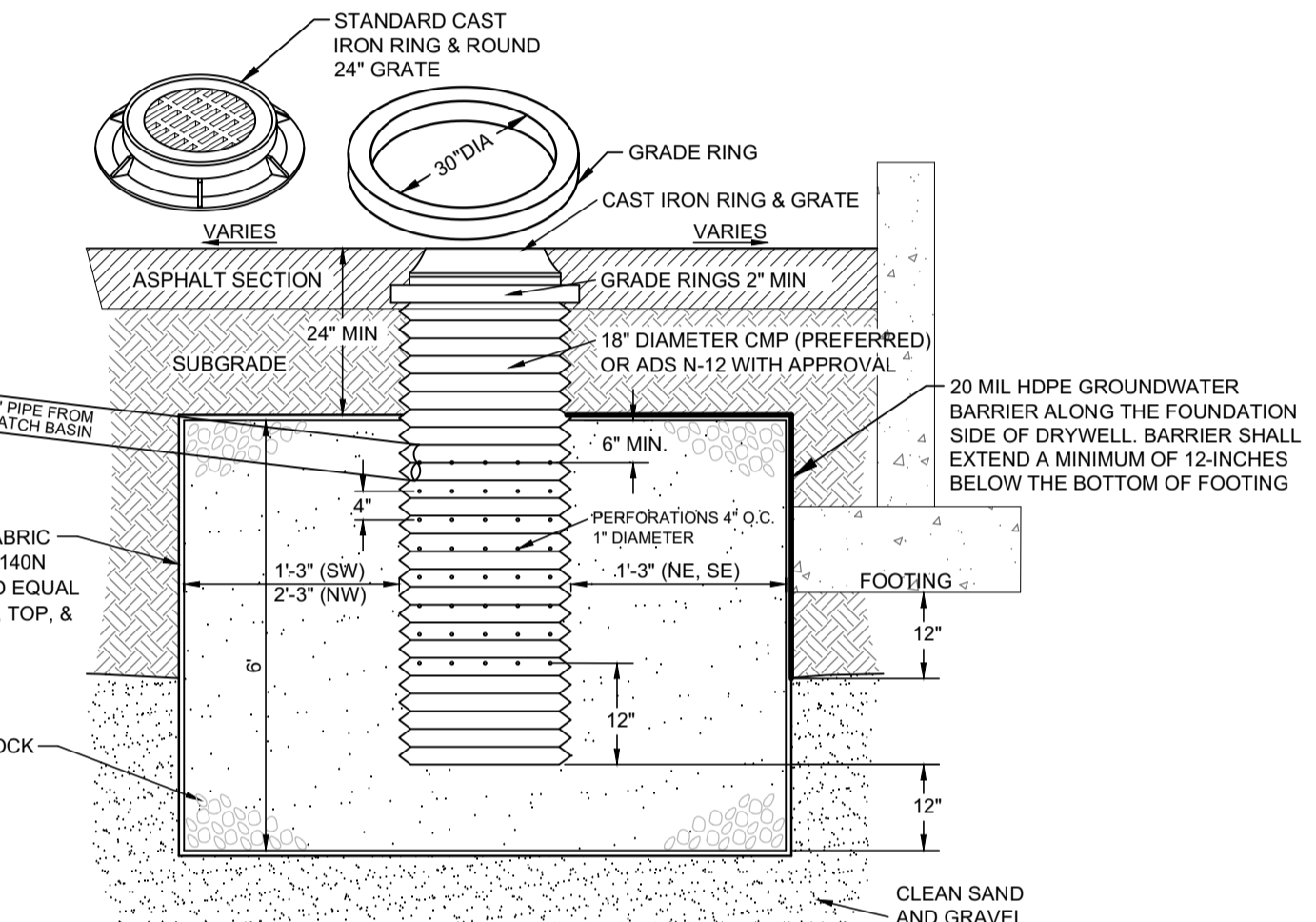


- NOTES:**
- BASES SHALL BE INSTALLED TO BE FLUSH WITH SURFACE.
 - ALL INSTALLATIONS SHALL HAVE 14" Ø MINIMUM FOUNDATION OR GROUTED INTO SOLID ROCK.
 - ALL STREET SIGNS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MUTCD.
 - SIGN PLACEMENT SHALL BE APPROVED BY THE CITY OF KETCHUM.
 - CITY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

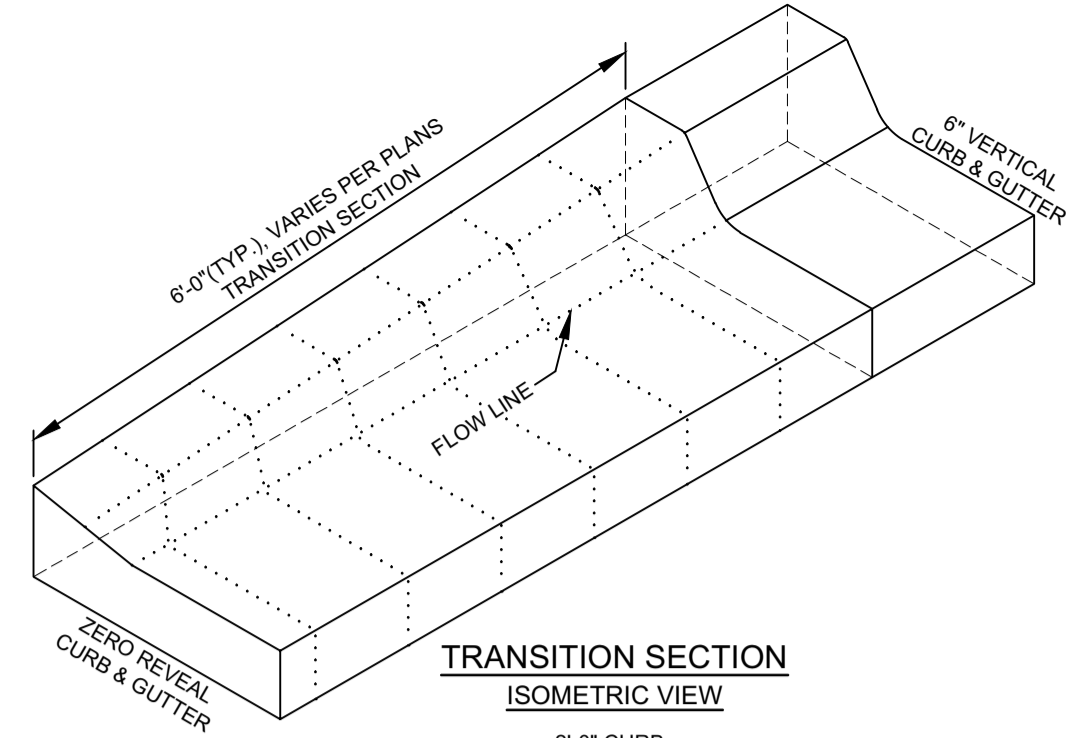
9
 C2.0
TYPICAL SIGN BASE DETAIL
 N.T.S.



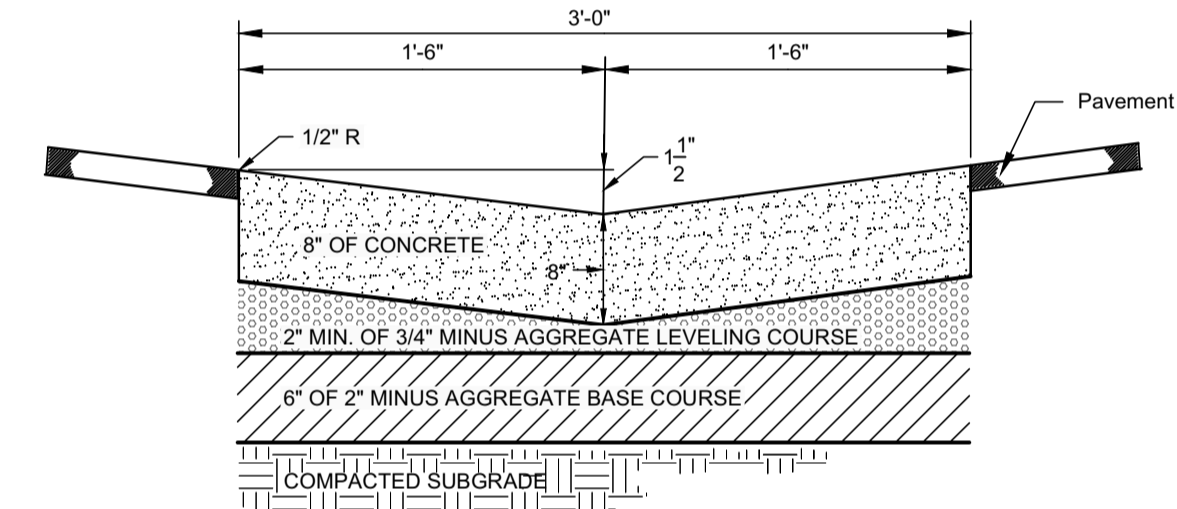
2
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TYPICAL CONCRETE SIDEWALK SECTION
 N.T.S.



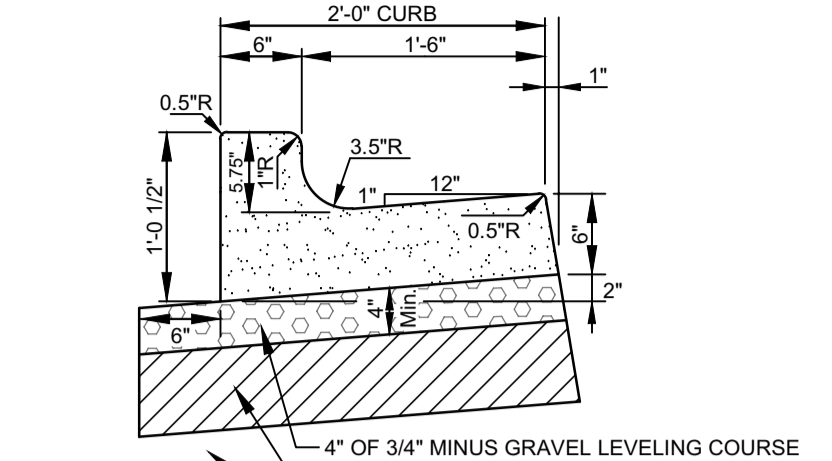
6
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ALLEY DRYWELL DETAIL
 N.T.S.



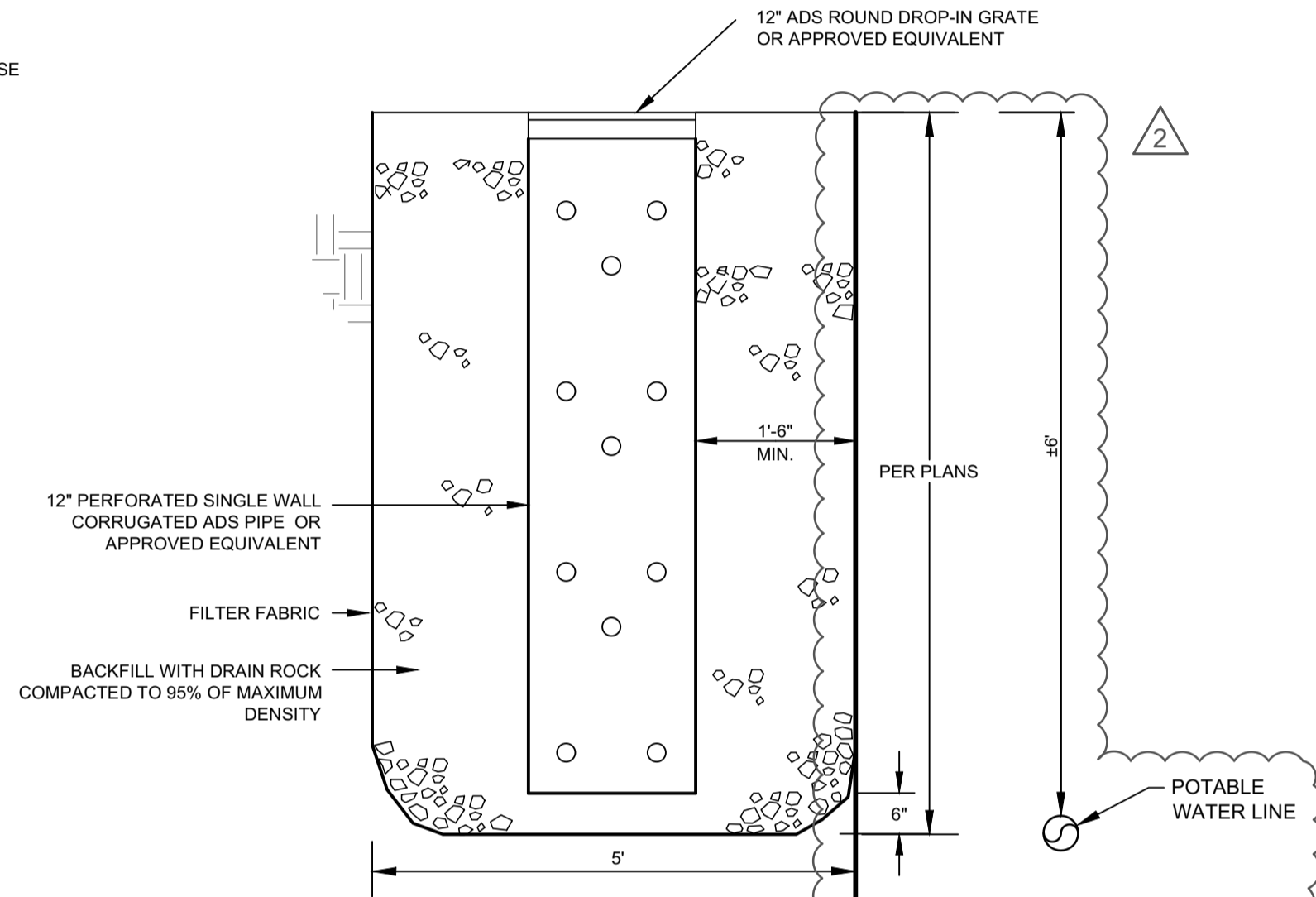
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TYPICAL CURB TRANSITION DETAIL
 N.T.S.



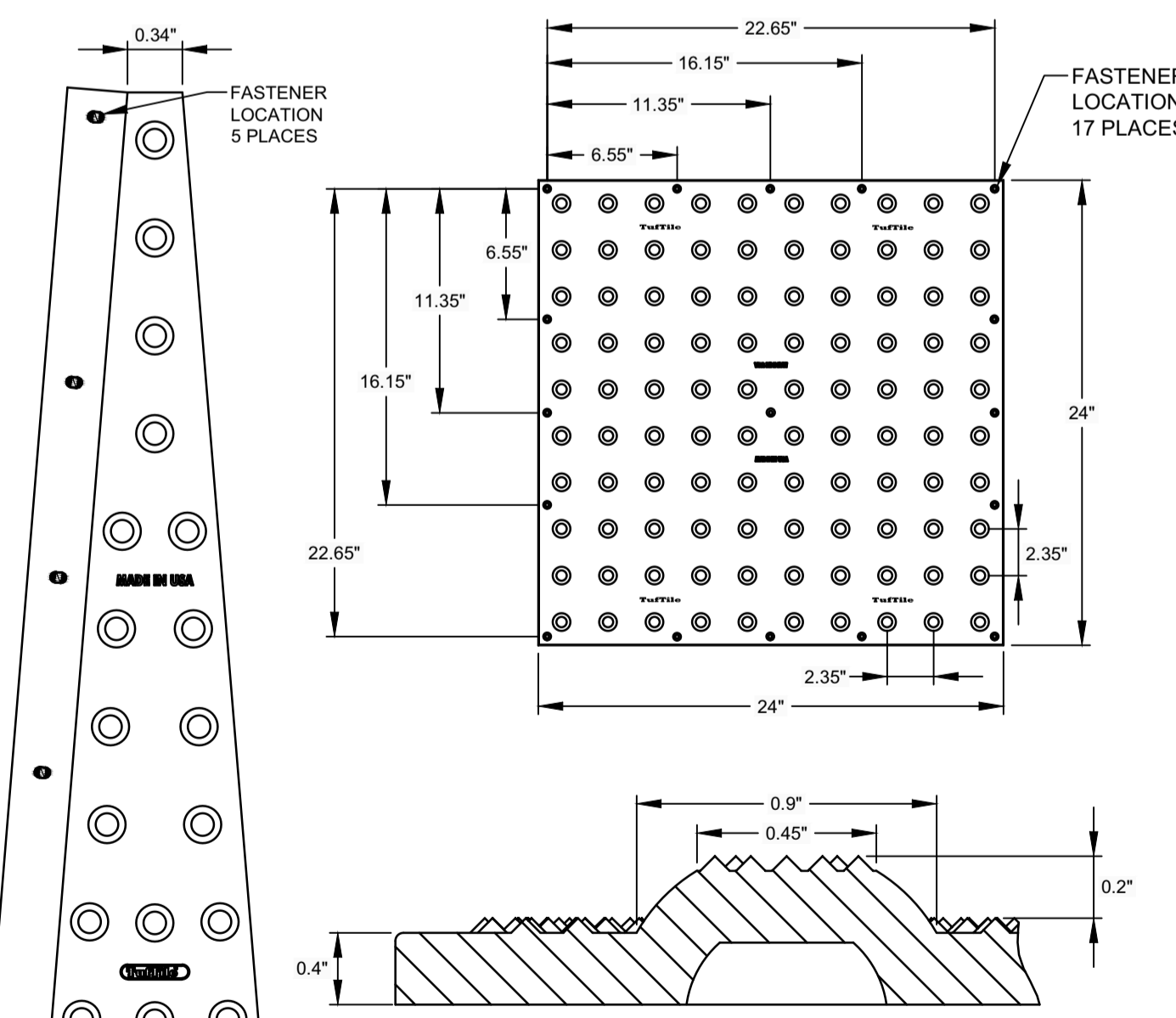
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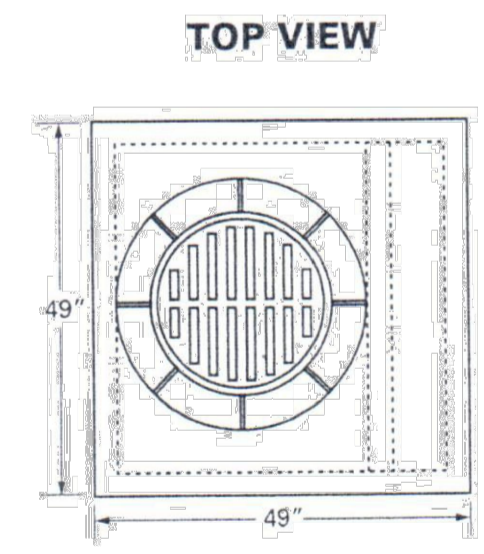
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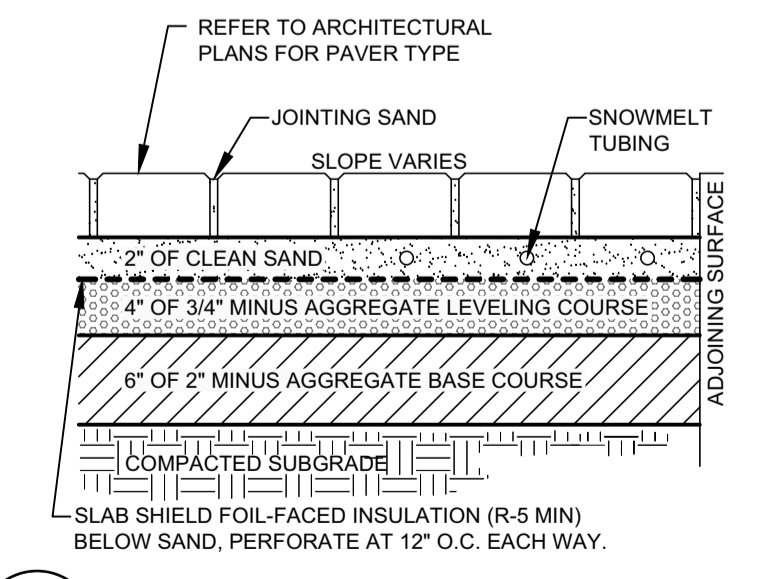
8
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LANDSCAPE DRYWELL DETAIL
 N.T.S.



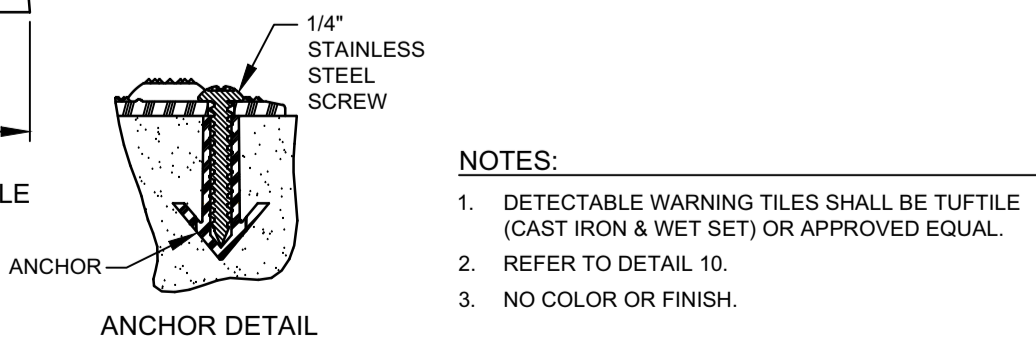
11
 C2.0
350 GALLON SAND AND GREASE TRAP
 N.T.S.



12
 C2.0
TRUNCATED DOME INSERT DETAIL
 N.T.S.



13
 C2.0
HEATED PAVER DETAIL
 N.T.S.

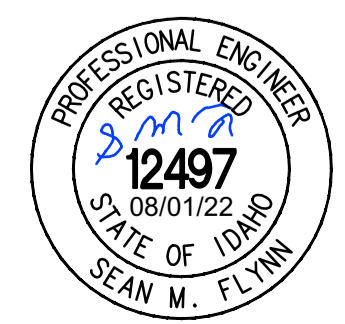


10
 C2.0
DETECTABLE WARNING PLATE DETAIL
 N.T.S.

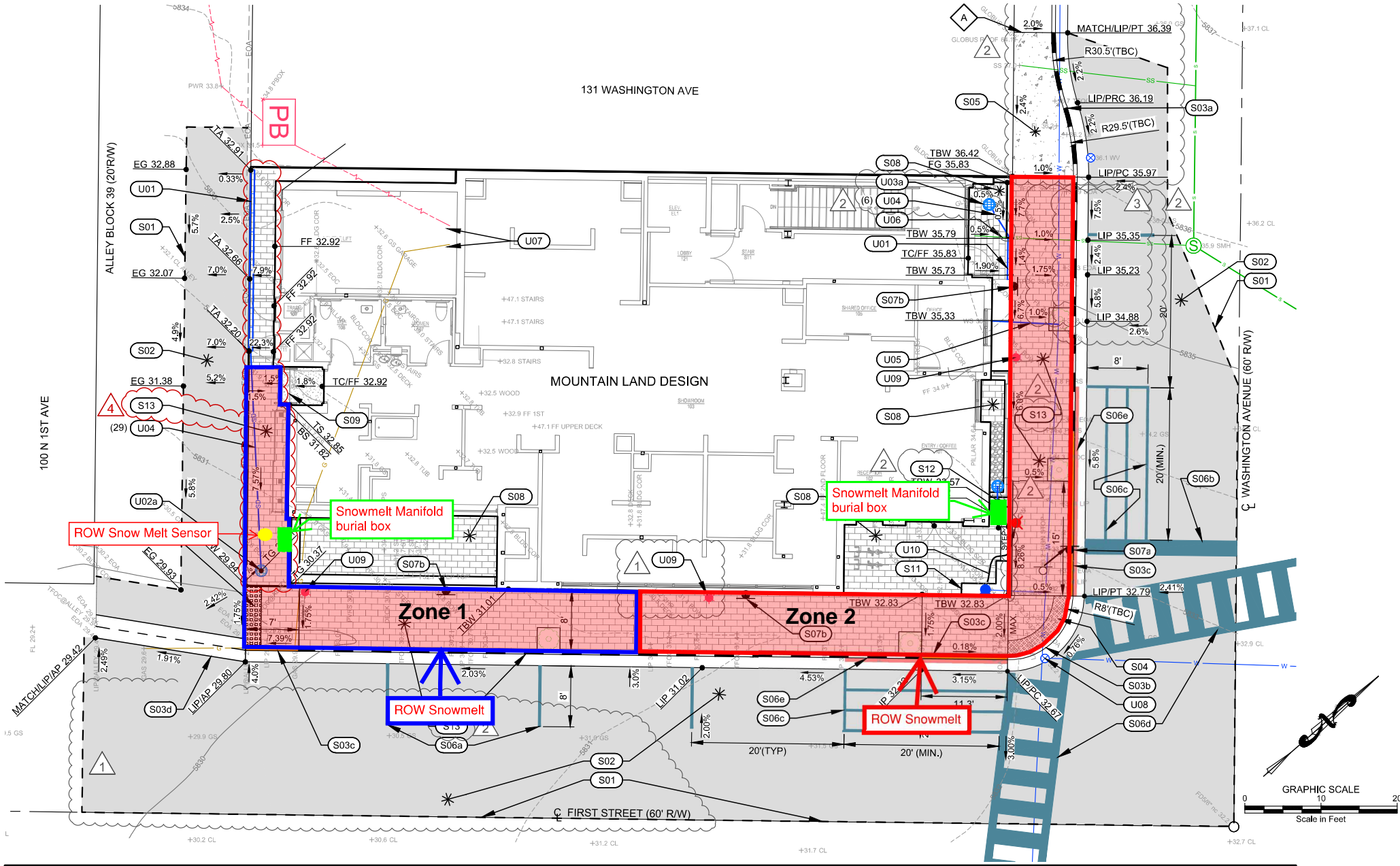
DESIGNED BY: SIKS
 CHECKED BY: SNE
 PROJECT INFORMATION:
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GALENA ENGINEERING, INC.
 Civil Engineers & Land Surveyors
 317 N. River Street
 Hailey, Idaho 83333
 (208) 788-1705
 (208) 788-4612 fax
 email: galena@galena-engineering.com

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131 WASHINGTON AVE



Snowmelt Manifold burial box

Snowmelt Manifold burial box

ROW Snow Melt Sensor

ROW Snowmelt

ROW Snowmelt

Zone 1

Zone 2

GRAPHIC SCALE
0 10 20
Scale in Feet



Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

KNIGHT XL COMMERCIAL BOILER

Submittal Sheet

KBX-Sub-11

KNIGHT XL COMMERCIAL CONDENSING HEATING BOILERS

Job Name: Mountain Land Design

Location: 111 N. Washington Ave

Engineer: Bryan Formosa

Agent/Wholesaler: _____

Contractor: Evan Plumbing, Inc.

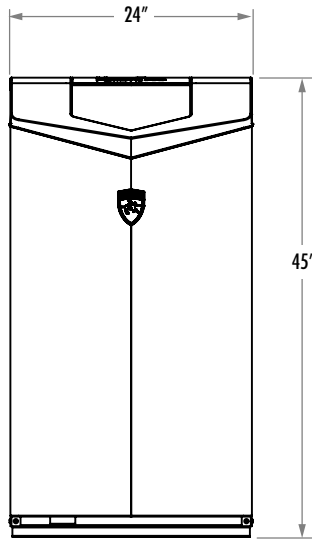
Model No. KBX0800N

Type Gas: Natural Gas

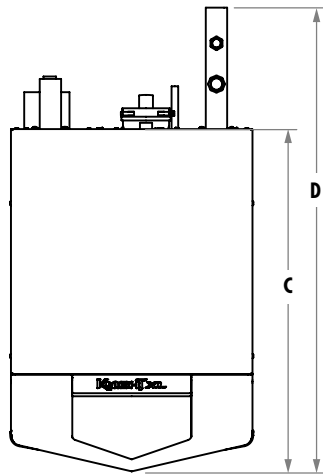
Equipment Tag(s): _____

NOTES:

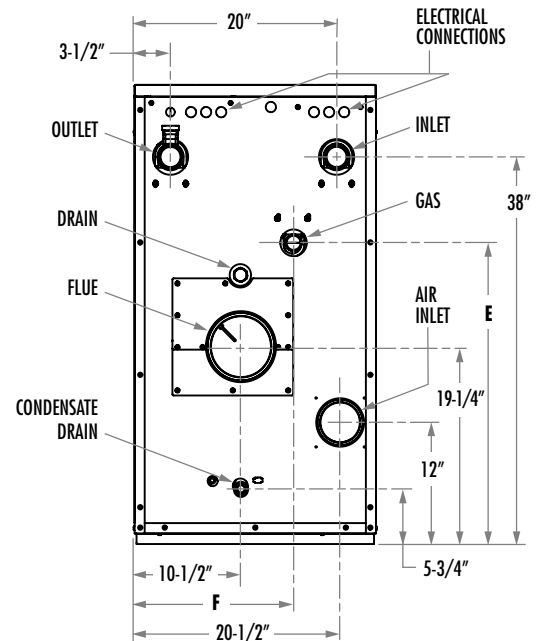
FRONT VIEW



TOP VIEW



BACK VIEW



KNIGHT XL		AHRI CERTIFIED		Input MBH					Net AHRI Rating, Water, MBH	Combustion Efficiency %	Thermal Efficiency %	Dimensions & Specifications					
Model Number	Min	Max	Turn Down	Gross Output MBH	Net AHRI Rating, Water, MBH	Combustion Efficiency %	Thermal Efficiency %	C				D	E	F	Gas Conn.	Water Conn.	Air Inlet
KBX0400N	3.3	399	10:1	387	337	97.0	97.0	33-1/2"	42-1/2"	29-3/4"	20-1/4"	1"	2"	4"	4"	365	
KBX0500N	50	500	10:1	485	422	97.0	97.0	33-1/2"	42-1/2"	29-3/4"	20-1/4"	1"	2"	4"	4"	377	
KBX0650N	65	650	10:1	631	549	97.0	97.0	42-1/2"	53"	30-1/2"	15-1/4"	1-1/4"	2"	4"	6"	456	
KBX0800N	80	800	10:1	776	675	97.0	97.0	42-1/2"	53"	30-1/2"	15-1/4"	1-1/4"	2"	4"	6"	484	
KBX1000N	99.9	999	10:1	969	843	97.0	97.0	50"	62"	30-1/2"	15-3/4"	1-1/4"	2-1/2"	6"	6"	567	

Notes:

- Information subject to change without notice.
- Dimensions shown are approximate and should not be used for construction purposes.
- Dimensions are in inches.
- Select "N" or "L" for Natural or LP gas.
- The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.
- 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.
- The ratings have been determined under the provisions governing forced draft burners.



Standard Features

- › **97% Thermal Efficiency**
- › **Modulating Burner with 10:1 Turndown**
 - Direct Spark Ignition
 - Low NOx Operation
 - Sealed Combustion
 - Low Gas Pressure Operation
- › **Stainless Steel Water Tube Heat Exchanger**
 - ASME-Certified, “H” Stamped
 - 160 psi Working Pressure
 - 50 psi Relief Valve
 - Combustion Analyzer Test Port
 - Fully Welded Design
- › **Smart System Control**
- › **Vertical and Horizontal Direct Vent**
 - Direct Vent up to 150 feet
 - PVC, CPVC, Polypropylene or AL29-4C
 - Factory Supplied Sidewall Vent Termination
- › **Other Features**
 - On/Off Switch
 - Adjustable High Limit with Manual Reset
 - Automatic Reset High Limit
 - Flow Switch
 - Flue Temperature Sensor
 - Low Air Pressure Switch
 - Temperature and Pressure Gauge
 - Condensate Trap
 - 10-Year Limited Warranty (See Warranty)

Smart System Features

- › **CON-X-US Remote Connect**
- › **Smart Touch Touchscreen Operating Control**
- › **Full Color 7” Touchscreen LCD Display**
- › **Loch-N-Link® USB Thumb Drive Port for Easy Programming**
- › **Cascading Sequencer with Built-in Redundancy**
 - Selectable Cascade Type:*
 - Lead Lag or Efficiency Optimization
 - Multiple Size Boilers
 - Front-End Loading
- › **3 Reset Temperatures Inputs w/Independent Outdoor Reset Curves for Each**
 - Outdoor Sensor
- › **Four-Pump Control**
 - System Pump with Parameter for Continuous Operation
 - Boiler Pump with Variable-Speed Control
 - Domestic Hot Water Boiler Pump
 - Domestic Hot Water Recirculation Pump Control with Sensor
- › **Building Management System Integration**
 - 0-10 VDC Input to Control Modulation or Setpoint
 - 0-10 VDC Input from Variable-Speed System Pump
 - 0-10 VDC Modulation Rate Output Signal
 - 0-10 VDC Enable/Disable Signal
- › **Programmable System Efficiency Optimizers**
 - Space Heating Night Setback
 - DHW Night Setback
 - Anti-Cycling
 - Ramp Delay
 - Boost Time and Temperature
- › **High-Voltage Terminal Strip**
 - 120 VAC/60 Hertz/1 Phase
 - Pump Contacts for 3 Pumps
- › **Low-Voltage Terminal Strip**
 - Building Recirculation Pump Start/Stop
 - Proving Switch Contacts
 - Alarm Contacts
 - Runtime Contacts
 - 3 Space Heat Thermostat Contacts
 - Tank Thermostat Contacts
 - System Sensor Contacts
 - Tank Sensor Contacts
 - Cascade Contacts
 - 0-10 VDC BMS Contacts
 - 0-10 VDC Boiler Rate Output Contacts
 - 0-10 VDC Boiler Pump Speed Contacts
 - 0-10 VDC System Pump Speed Contacts
 - ModBus/BACnet Contacts
- › **Time Clock**
- › **Data Logging**
 - Ignition Attempts
 - Last 10 Lockouts
 - Space Heat Run Hours
 - Domestic Hot Water Run Hours
 - Custom Maintenance Reminder w/ Contact Info
 - Password Security
 - Customizable Freeze Protection Parameters

Optional Equipment

- Wireless Outdoor Temperature Sensor
- Multi-Temperature Loop Control
- Variable-Speed Boiler Circulator
- Constant-Speed Boiler Circulator
- ModBus Communication
- BMS Gateway to BACnet or LonWorks
- BACnet MSTP
- Alarm on Any Failure
- Condensate Neutralization Kit
- Concentric Vent Kit (KBX0400-KBX650)
- Common Vent Kit
- High and Low Gas Pressure Switches w/Manual Reset (KBX0500-KBX1000)
- Low Water Cut-Off w/Manual Reset & Test

Firing Codes

- M7 California Code
- M9 Standard Construction
- M13 CSD1/FM/GE Gap (KBX0500-KBX1000)

Venting Options

- Direct Vent Vertical
- Direct Vent Horizontal
- Vertical Vent with Sidewall Air Intake
- Sidewall Vent with Rooftop Air Intake
- Vertical Vent with Optional Room Air
- Sidewall Vent with Optional Room Air



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





ViegaPEX™ Barrier Hydronic Radiant Heat Tubing

Scope

This specification designates the requirements for ViegaPEX Barrier cross-linked polyethylene (PEX) tubing for use in hydronic radiant heating systems. ViegaPEX Barrier includes an oxygen barrier layer that helps restrict the passage of oxygen through the wall of the tubing. All ViegaPEX is manufactured and tested to the requirements of ASTM F876, F877, CSA B137.5 and is CTS-OD (copper tube size outer dimension controlled) with an SDR - (standard dimension ratio) 9 wall thickness. ViegaPEX Barrier is compatible with both ViegaPEX Press fittings and F1807 PEX Crimp fittings. Viega has no control over the quality of other manufacturers, therefore, we do not extend any warranty to those components that are not supplied by Viega.

Materials

ViegaPEX Barrier tubing is produced from cross-linkable, high density polyethylene resin. This cross-linkable resin is produced by grafting organo-silane molecules onto a base polyethylene chain. A catalyst that initiates the cross-linking process is blended with the resin before extrusion. Cross-linking is conducted after extrusion by exposing the tubing to heat and moisture (steam). ViegaPEX Barrier includes four (4) layers. The first layer is cross-linked, high density polyethylene. The second layer is an adhesive for the third layer, the ethylene vinyl alcohol layer (EVOH oxygen barrier). The fourth layer is another thin layer of polyethylene, applied on the outside to protect the EVOH layer from damage. EVOH is highly resistant to the passage of oxygen.

Marking and Certification

Tubing is marked with manufacturer, ViegaPEX Barrier, nominal size, rating, codes and standards, approvals, date, material code and location of production (i.e., 0000FT Viega ViegaPEX Barrier™ 5/16" SDR-9 100 PSI @ 180°F [NSF-pw U.P. Code ASTM F876/F877 CSA B137.5] ICBO ES ER-5287 PEX1006 Date Code Material Code Made in the USA 0002FT). Tubing is third party tested to the requirements of the stated ASTM and CSA standards. Tubing includes incremental footage markings to assist with loop layout. ViegaPEX is certified to NSF 61 and 14 for use as part of, or connected to a potable water system.

Handling and Installation

ViegaPEX Barrier tubing is recommended for hydronic radiant heating, cooling and snow melting systems using water or a water/glycol mix as the heat transfer media. Tubing may be installed in concrete, gypsum based lightweight concrete, sand, asphalt (in accordance with special guidelines) in or under wood flooring or behind wallboard or plaster. ViegaPEX Barrier may also be used as transfer lines for baseboard heating systems with a maximum operating temperature of 200°F @ 80 psi.

Recommended Uses

Install ViegaPEX Barrier in accordance with installation manuals provided by manufacturer and applicable code requirements. Water or air can be used to pressure test the system. Please follow manufacturer's requirements on pressure and length of time. ViegaPEX Barrier comes with a 90 day UV protection. For information on the suitability for other applications, contact your Viega representative.

Property	ASTM Test Method	Typical Values	
		English Units	SI Units
Density	D 792	–	0.952 g/cc
Melt Index ¹	D 1238	–	0.7g/10 min
Flexural Modulus ²	D 638	150,000 psi	1000 MN/m ²
Tensile Strength @ Yield (2 in/min)	D 638	3,900 psi	26 MN/m ²
Coefficient of Linear Thermal Expansion @ 68°F	D 696	8 x 10 ⁻⁴ /°F	1.4 x 10 ⁻⁴ /°C
Hydrostatic Design Basis @ 73°F (23°C)	D 2837	1,250 psi	8.6 MPA
Hydrostatic Design Basis @ 180°F (82°C)	D 2837	800 psi	5.5 MPA
Vicat Softening Point	D 648	255°F	124°C
Thermal Conductivity	D 177	2.7 Btu/hr/ft ² /°F	1.1 x 10 ⁻³ cal/sec/cm ² /°C

1. Before Cross-linking

2. 73°F

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TechData

viega

Quality Assurance

ViegaPEX Barrier tubing is manufactured and tested to the requirements of ASTM F876, F877 and CSA B137.5. The degree of cross-linking of finished tubing is determined by method ASTM D2765.

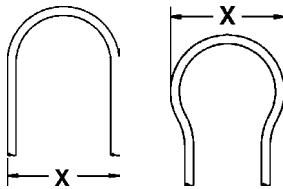
Quality Assurance

NSF-pw - tested for health effects to ANSI/NSF 61 and performance to ANSI/NSF standard 14.

Tube Spacing

When the tube spacing is less than the minimum recommended bending dimension, the loops ends should be swept out to at least the dimensions shown.

Otherwise, if tube spacing is equal or greater than "X", a standard loop may be used.



Dimension X

Tubing Size	With the Coil
5/16"	7"
3/8"	8"
1/2"	10"
5/8"	12"
3/4"	14"
1"	18"
1-1/4"	22"
1-1/2"	26"
2"	34"

SDR-9 PEX Tubing ASTM F876/F877/CTS-OD SDR-9

Tubing Size	O.D.	Wall Thickness	Nom. I.D.	Weight Per Ft	Vol. (gal./100 Ft)
5/16"	.430±.003	.064+.010	0.292	.0340	0.34
3/8"	.500±.003	.070+.010	0.350	.0413	0.50
1/2"	.625±.004	.070+.010	0.475	.0535	0.92
5/8"	.750±.004	.083+.010	0.574	.0752	1.34
3/4"	.875±.004	.097+.010	0.671	.1023	1.82
1"	1.125±.005	.125+.010	0.862	.1689	3.04
1-1/4"	1.375±.005	.153+.015	1.053	.2523	4.52
1-1/2"	1.625±.006	.181+.019	1.243	.3536	6.30
2"	2.125±.006	.236+.024	1.629	.6026	10.83

NOTE: Dimensions are in English units. Tolerances shown are ASTM requirements. ViegaPEX is manufactured within these specifications.

ViegaPEX Barrier tubing is available in both straight lengths and coils.

ViegaPEX Barrier Oxygen Permeation

All sizes have less than 0.1 gram m³/day

Note: ViegaPEX Barrier tubing meets DIN 4726 requirements for oxygen tight pipes.

Pressure Drop Table Expressed as psi/ft. SIZE

GPM	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
.1	.002	.001							
.2	.009	.004	.001						
.3	.018	.008	.002	.001					
.4	.031	.013	.003	.001					
.5	.047	.020	.004	.002					
.6	.066	.027	.006	.003	.001				
.7	.088	.036	.008	.003	.002				
.8		.047	.011	.004	.002				
.9		.058	.013	.005	.002				
1		.070	.016	.007	.003	.001			
1.5			.034	.014	.006	.002			
2			.058	.024	.011	.003			
3				.050	.023	.007			
4				.085	.039	.011			
6				.181	.082	.024			
8					.140	.041			
10					.211	.062	.023		
12					.296	.087	.032		
14							.042		
16							.053	.022	
18							.065	.027	
20							.078	.033	
22							.093	.039	
24							.108	.045	
26								.052	
28								.060	
30								.067	
32								.075	.024
34									.027
36									.030
38									.033
40									.037
45									.046
50									.056
55									.066
60									.078
65									.090
70									.104
75									.118

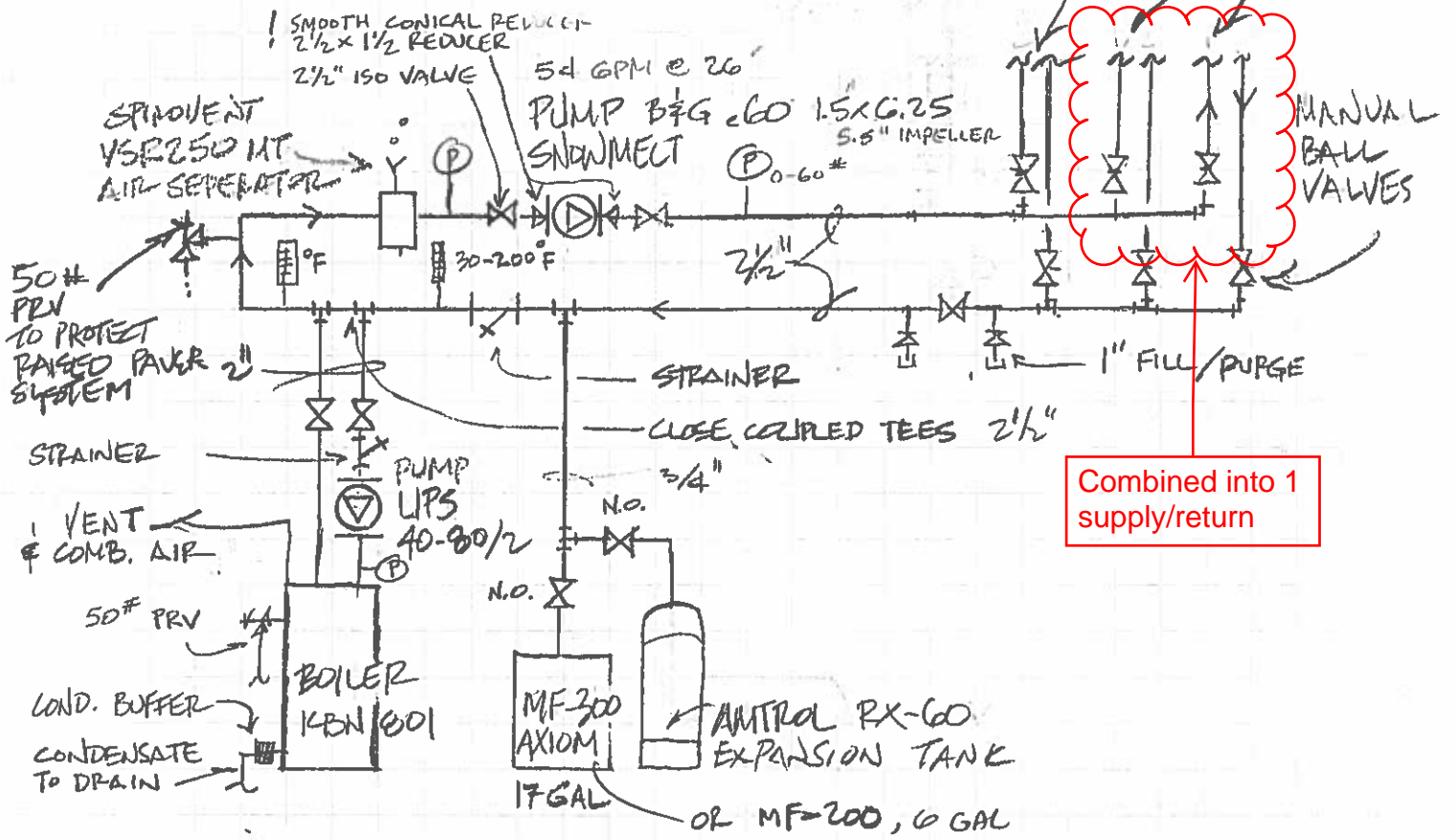
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SNOWMELT SYSTEM

10-5-2020
 MLB SNOWMELT

1/2" PEX @ RAISED PAVEMENT SYSTEM - SIZE RUNNOUTS @ 4 fps
 300' LOOPS 3/4" O₂ PEX 9" O.C. SIDEWALK/CONC.



Combined into 1 supply/return

CONCRETE - 3/4" O₂ BARRIER PEX 9" O.C., 300' MAX LOOPS
 RAISED PAVEMENT DECK - SEE NEW PRODUCT GUIDELINES
 TEKMAX SNOWMELT CONTROLLER & SOCKET SENSOR
 SNOWMELT-MANIFOLD SIZES:
 1 1/2" FOR UP TO 4 LOOPS
 2" " 8 LOOPS
 2 1/2" " 12 LOOPS
 2.4 GPM/LOOP
 300' LOOP LENGTH MAXIMUM
 AIR BLEEDER
 BALL VALVE
 MANIFOLD
 VALVE
 3/4"

3/7/2020

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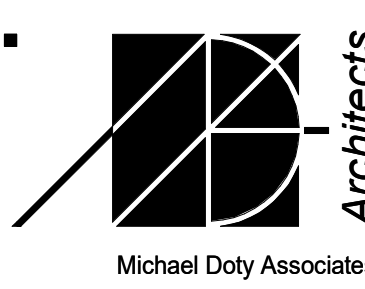
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5	SI-6	8/20/2021
6	SI-7	9/1/2021

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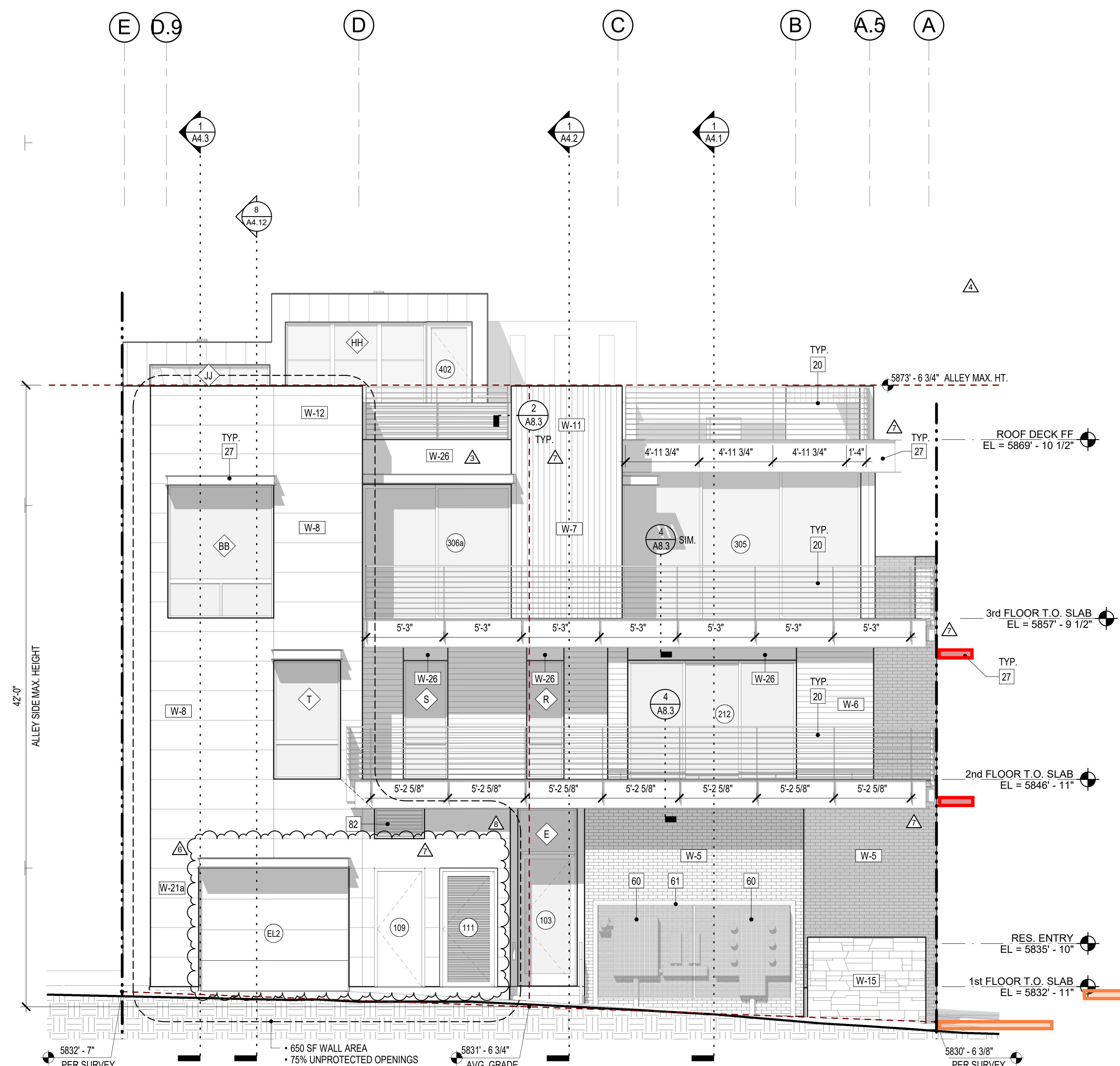
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DATE: 5/14/2021

SHEET TITLE:
BUILDING ELEVATIONS



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- RIGHT OF WAY ENCROACHMENT**
- METAL SOLAR SHADES - 2'-6" ENCROACHMENT AT FIRST STREET
 - HYDRONIC SNOWMELT IN SIDEWALKS AT WASHINGTON AVENUE AND 1ST STREET

- GENERAL NOTES**
REFER TO SHEET A0.22 FOR GENERAL NOTES
- PLAN NOTES / DEMO NOTES**
-•- INDICATES PLAN NOTE. REFER TO SHEET A0.22 FOR PLAN NOTE LEGEND.
◇ INDICATES DEMO NOTE. REFER TO SHEET A0.22 FOR DEMO NOTE LEGEND.
- MATERIAL IDENTIFICATION CODES**
•(XX)-1 INDICATES MATERIALS CALLED OUT ON PLANS, ELEVATIONS, SECTIONS, AND DETAILS. REFER TO A0.22 FOR MATERIAL ID LEGEND
- ASSEMBLY TYPES**
•W# INDICATES WALL, FLOOR, OR ROOF TYPE. REFER TO SHEETS A0.20 & A0.21 FOR ASSEMBLY LEGENDS.

SHEET	OF
A3.2	TOTAL

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3	SI-5	06/11/2021
4	SI-6	8/23/2021

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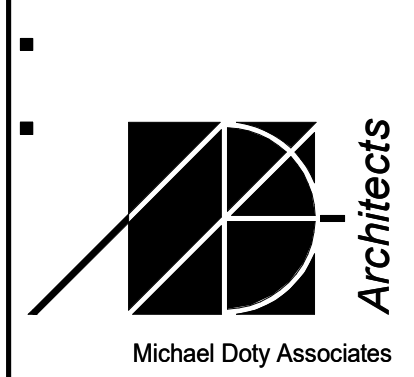
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SOUTH (FIRST ST) ELEVATION 1
 1/4" = 1'-0"

RIGHT OF WAY ENCROACHMENT

METAL SOLAR SHADES - 2'-6"
 ENCROACHMENT AT FIRST STREET

HYDRONIC SNOWMELT IN SIDEWALKS AT
 WASHINGTON AVENUE AND 1ST STREET

GENERAL NOTES

REFER TO SHEET A0.22 FOR GENERAL NOTES

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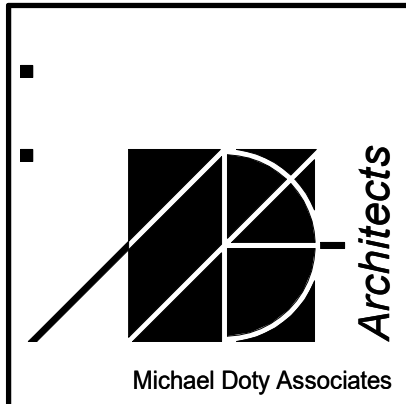
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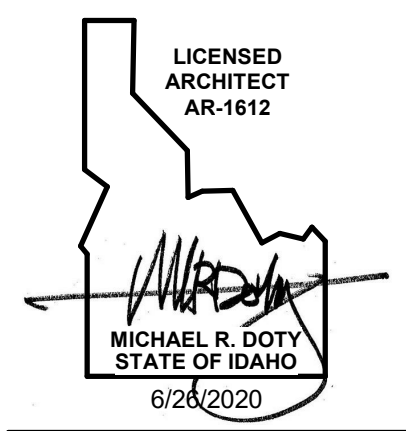
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1	PLAN CHECK CORR.	10/29/2019

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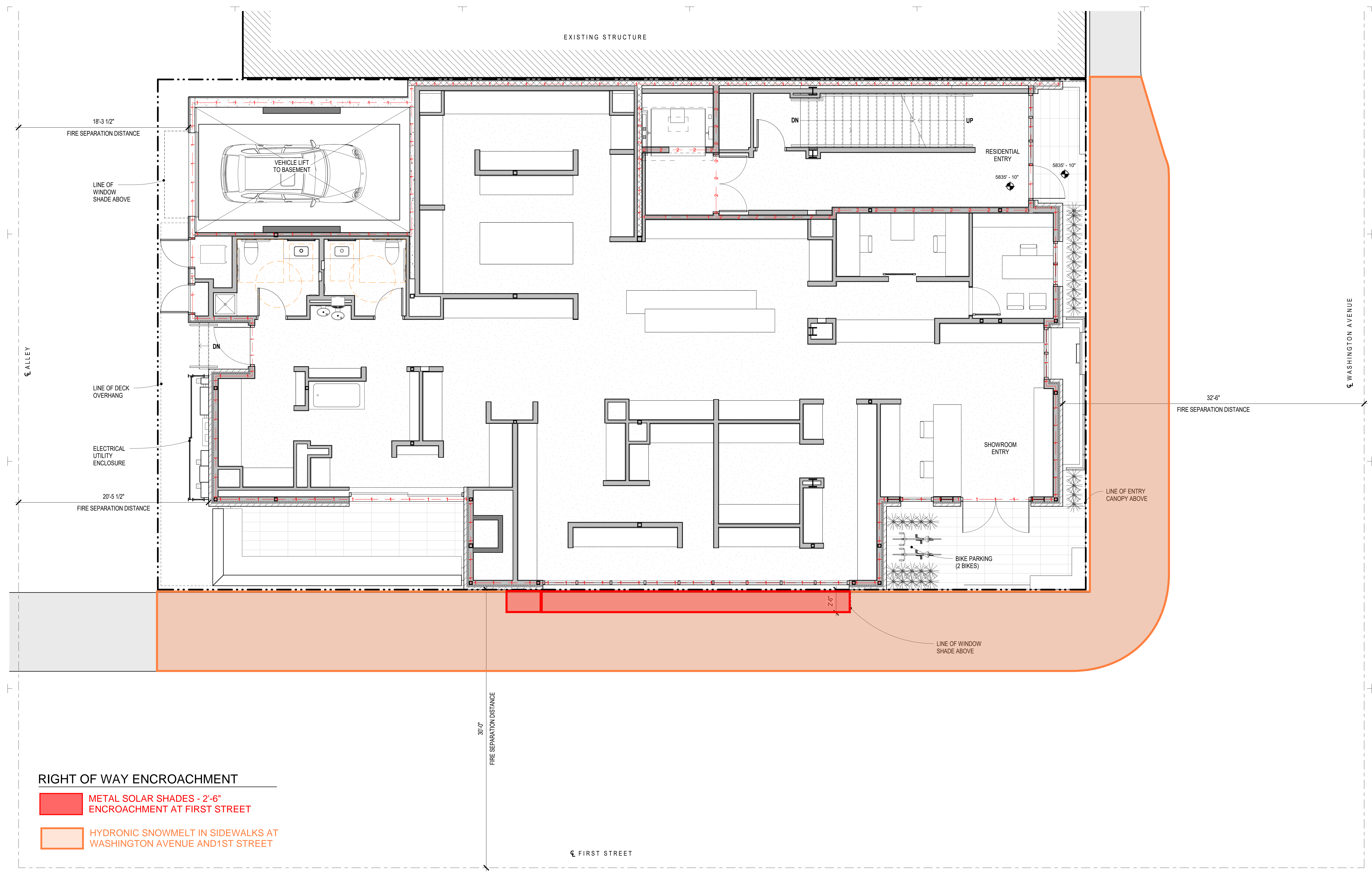
SHEET TITLE:
 ARCHITECTURAL SITE PLAN



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SHEET	OF
A1.0	TOTAL



RIGHT OF WAY ENCROACHMENT

- METAL SOLAR SHADES - 2'-6" ENCROACHMENT AT FIRST STREET
- HYDRONIC SNOWMELT IN SIDEWALKS AT WASHINGTON AVENUE AND 1ST STREET

ARCHITECTURAL SITE PLAN 1
 1/4" = 1'-0"
 PROJECT NORTH TRUE NORTH

PLANNING AND ZONING DATA

LEGAL DESCRIPTION: LOT 4, BLOCK 39, KETCHUM TOWNSITE, KETCHUM, IDAHO	SITE AREA AND F.A.R.: SITE AREA: 5,500 SQ. FT. (0.13 ACRE) 11,422 SQ. FT. / 5,500 SQ. FT. = 2.08 F.A.R.	SNOW STORAGE: THERE ARE NO VIABLE SNOW STORAGE AREAS LOCATED ON SITE. ALL SNOW MANAGEMENT WILL BE ACCOMPLISHED BY SNOWMELT AND HAULING OFF-SITE.
ZONING: CC-2 COMMUNITY CORE; MIXED USE	COMMUNITY HOUSING: BASEMENT APARTMENT NET LIVABLE AREA: 978 SF + 59 SF STORAGE	
BUILDING GROSS AREA (AS DEFINED BY KETCHUM MUNICIPAL CODE): BASEMENT: 4,528 SF (NOT INCLUDED IN TOTAL) MAIN FLOOR: 4,473 SF 2ND FLOOR: 4,083 SF 3RD FLOOR: 3,236 SF ROOF ACCESS: 278 SF TOTAL: 12,070 SF	SETBACKS: EAST (FRONT): 5'-0" (AVERAGE) REQUIRED, 6'-3-12" (AVERAGE) PROPOSED SOUTH (SIDE): 5'-0" (AVERAGE) REQUIRED, 5'-1" (AVERAGE) PROPOSED WEST (REAR/ALLEY): 3'-0" MIN. REQUIRED 3'-3" PROPOSED NORTH (INTERIOR SIDE): 0' REQUIRED 2' PROPOSED	
SUBTRACT (4) 9x18 PARKING SPACES, AS ALLOWED PER FLOOR AREA, GROSS DEFINITION: 12,070 SF -648 SF 11,422 SF GROSS FLOOR AREA		

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 REFER TO SHEET A0.22 FOR GENERAL NOTES
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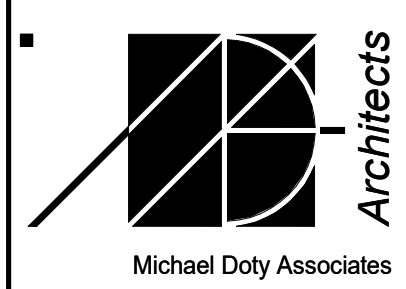
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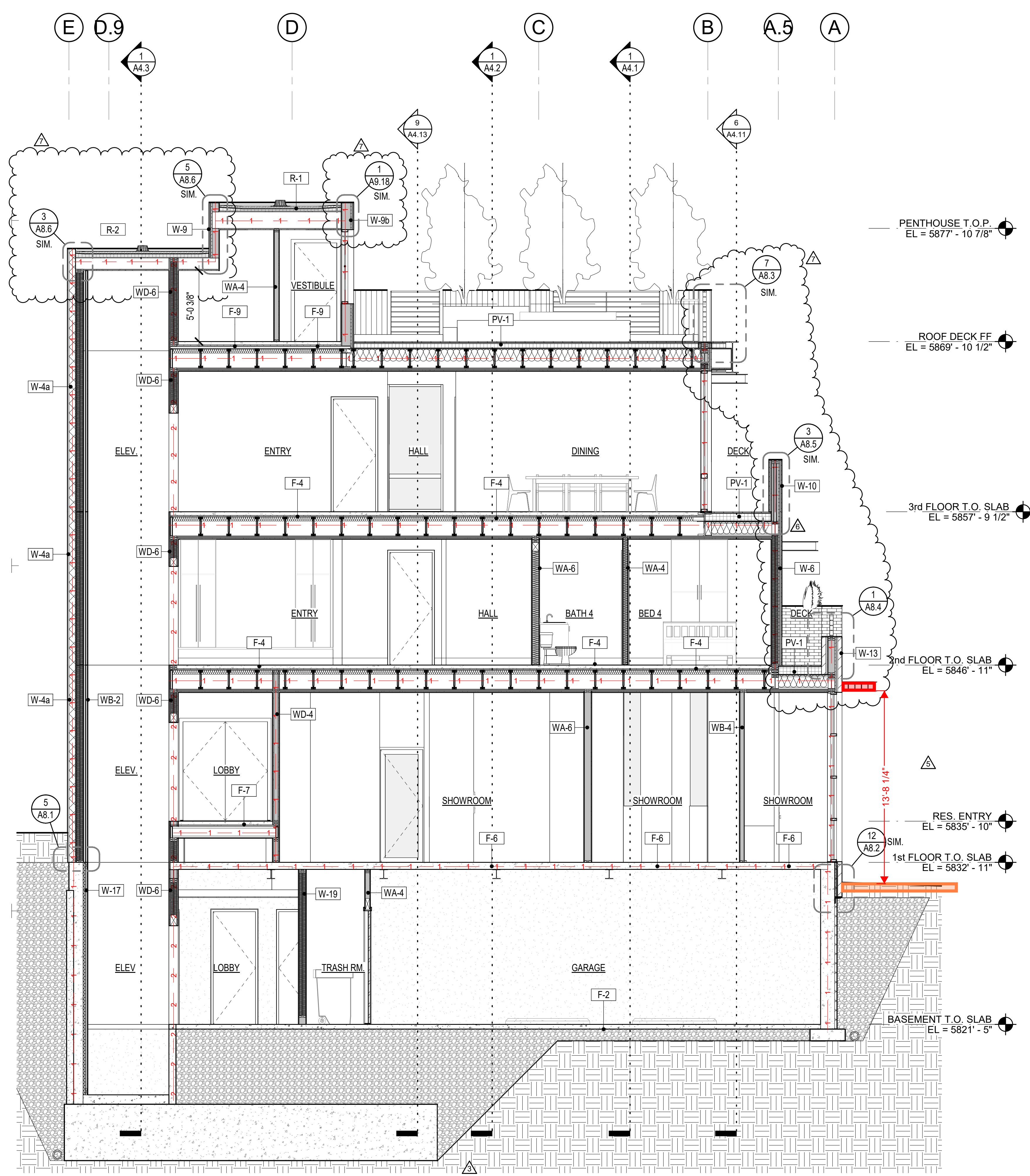
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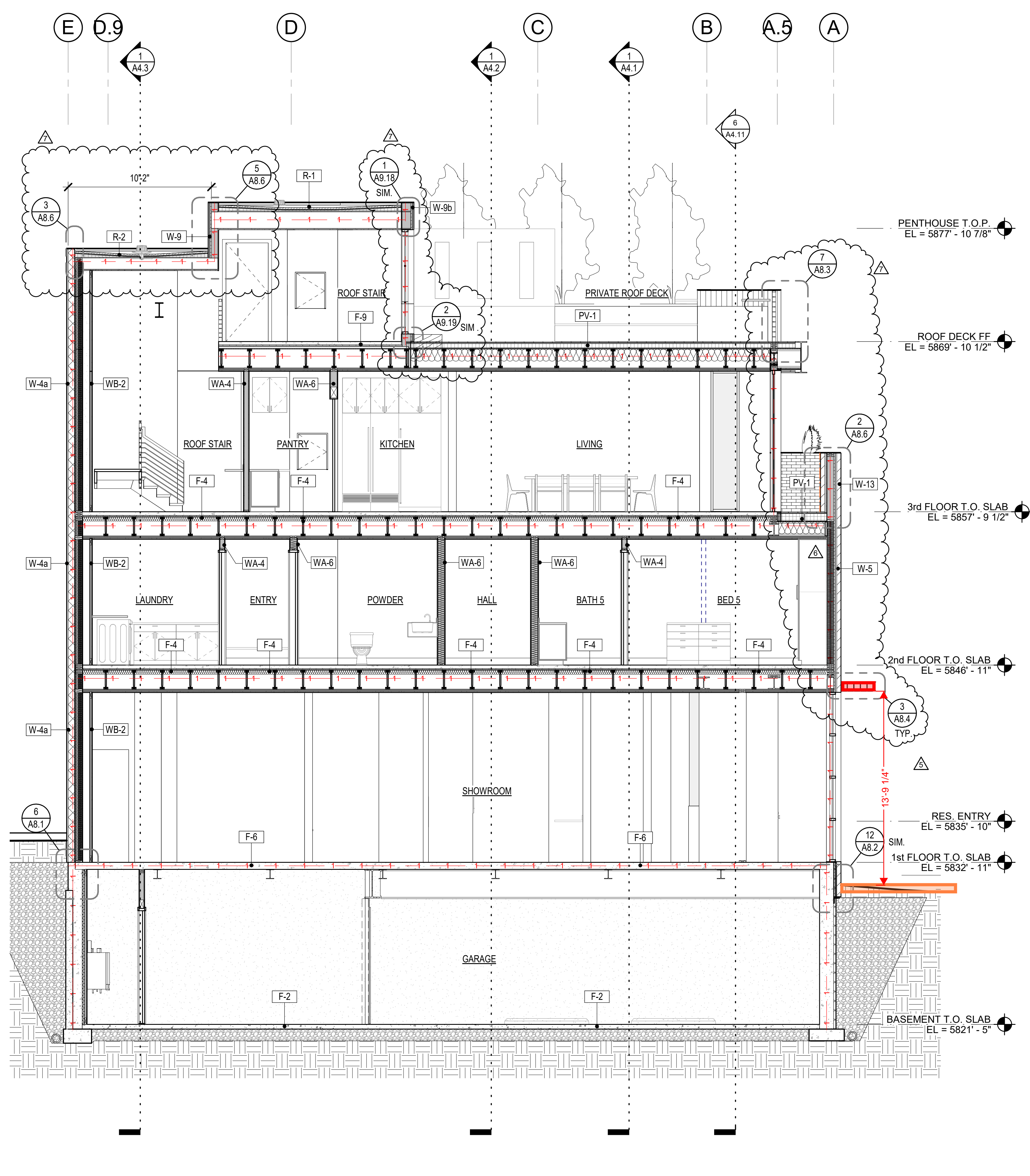
SHEET TITLE:
 BUILDING SECTIONS



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BUILDING SECTION 3.1
 1/4" = 1'-0" **2**



BUILDING SECTION 2.8
 1/4" = 1'-0" **1**

RIGHT OF WAY ENCROACHMENT

- METAL SOLAR SHADES - 2'-6" ENCROACHMENT AT FIRST STREET
- HYDRONIC SNOWMELT IN SIDEWALKS AT WASHINGTON AVENUE AND 1ST STREET

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