

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



SECTION 200
UTILITIES

LAST REVISION : JULY 2013

MATERIALS

1. AGGREGATE BASE SHALL BE CBE PER TOWN STANDARD, AND AS APPROVED BY THE PUBLIC WORKS DIRECTOR
2. ASPHALT CONCRETE SHALL BE PER TOWN STANDARD, AND AS APPROVED BY THE PUBLIC WORKS DIRECTOR
3. CORRUGATED METAL PIPE CULVERTS SHALL CONFORM TO THE PROVISIONS IN SECTION 66, "CORRUGATED METAL PIPE", OF THE CSS AND SHALL BE 12 GAGE. CORRUGATED STEEL FLARED END SECTIONS SHALL CONFORM TO THE PROVISIONS IN SECTION 75, "MISCELLANEOUS METAL", AND SECTION 70, "MISCELLANEOUS DRAINAGE FACILITIES" OF THE CSS.
4. PLASTIC PIPE CULVERTS SHALL CONFORM TO THE PROVISIONS IN SECTION 64, "PLASTIC PIPE" OF THE CSS.
5. SLURRY CEMENT BACKFILL SHALL CONFORM TO TOWN STANDARDS 005-0 AND AS APPROVED BY THE PUBLIC WORKS DIRECTOR
6. CONCRETE SHALL BE PER TOWN STANDARD 004-0, AND AS APPROVED BY THE PUBLIC WORKS DIRECTOR.
7. INSTALLATION OF TRAFFIC STRIPES AND PAVEMENT MARKINGS WILL BE IN CONFORMANCE WITH THE PROVISIONS OF SECTION 84, "TRAFFIC STRIPES AND PAVEMENT MARKINGS", OF THE CSS.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



GENERAL REFERENCES UTILITIES

PUBLIC WORKS
DIRECTOR APPROVAL: 

DATE: May 7, 2014

STANDARD PLAN

200-2

SHEET 1 OF 1

GENERAL NOTES FOR A.C. TRENCH PATCH

1. ALL A.C. REPLACEMENT REQUIREMENTS ARE MINIMUM WIDTHS ONLY. THE PUBLIC WORKS DIRECTOR MAY REQUIRE WIDER PATCH SECTIONS OR OTHERWISE ALTER THESE REQUIREMENTS.
2. IF SAW CUT IS WITHIN 2 FEET OF AN EXISTING PAVEMENT EDGE, GUTTER LIP OR EXISTING PAVEMENT PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
3. LONGITUDINAL TRENCH PATCH WIDTH: FOR COLLECTORS, ARTERIALS AND EXPRESSWAYS: IF SAW CUT EDGES FOR LONGITUDINAL OR TRANSVERSE EXCAVATIONS FALL WITHIN A TRAVEL LANE, SAW CUT SHALL BE THE SPECIFICATIONS FOR TRANSVERSE PATCHES AND THE ENTIRE TRAVEL LANE ROTOMILLED TO A DEPTH OF TWO INCHES AND OVERLAID WITH TWO INCHES OF BITUMINOUS PLANT MIX AS DIRECTED BY THE ENGINEER.
4. FOR COLLECTORS, ARTERIALS AND EXPRESSWAYS THE EDGE OF TRENCHES FOR CONDUITS SHALL BE LOCATED A MINIMUM OF 9" FROM GUTTER LIP AND SHALL BE PATCHED AS PER THE ABOVE DETAIL.
5. AGGREGATE BASE AND BITUMINOUS PAVEMENT SHALL BE IN ACCORDANCE WITH TOWN OF MAMMOTH LAKES REQUIREMENTS OR CALTRANS STANDARD SPECIFICATIONS, LATEST REVISION. PAVEMENT MIX SHALL BE PG 64-28 UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF LOOP DETECTORS, ADJUSTMENT OF UTILITIES TO GRADE, INSTALLATION OF TEMPORARY PAVEMENT MARKERS IF REQUIRED, AND REPLACEMENT OF ALL PERMANENT STRIPING AND MARKINGS DAMAGED OR OBLITERATED BY THE CONTRACTOR'S OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF SURVEY MONUMENTS DESTROYED OR DISTURBED BY CONTRACTOR'S OPERATION, AND SHALL FILE THE APPROPRIATE DOCUMENTATION WITH THE COUNTY. THE CONTRACTOR SHALL ADJUST SURVEY WELL MONUMENTS TO FINISHED GRADE.
7. SEE TOWN STANDARD DETAILS FOR P.C.C. CURB REPLACEMENT.
8. IF PATCH FAILURE OCCURS, THE PERMITEE WILL BE NOTIFIED OF SUCH DEFICIENCIES AND ALLOWED TO REMOVE, REPLACE, OR REMEDY HIS WORK. UPON FAILURE OF THE CONTRACTOR TO PROMPTLY COMPLY AND UNDER ORDER OF THE PUBLIC WORKS DIRECTOR, PATCH FAILURES MAY BE REMEDIED, REMOVED, AND REPLACED BY THE TOWN AT PERMITEE'S SOLE EXPENSE. THE TOWN MAY WITHHOLD ISSUING FUTURE ENCROACHMENT PERMITS UNLESS ALL PAYMENTS ARE CURRENT FOR FAILURES REMEDIED BY THE TOWN.
9. PERMANENT PATCHING OF NON-BITUMINOUS SURFACES WILL CONSIST OF MATERIALS AND DIMENSIONS MATCHING OR EXCEEDING THE REQUIREMENTS OF THE ORIGINAL CONSTRUCTION AND MUST BE APPROVED BY THE PUBLIC WORKS DIRECTOR. PORTLAND CEMENT CONCRETE REMOVAL AND REPLACEMENT SHALL EXTEND TO AN EXISTING TOOLED OR SAW CUT JOINT IN ALL DIRECTIONS. CONCRETE SURFACE SHALL BE PER TOWN STANDARDS AND SHALL MATCH EXISTING IN SURFACE TEXTURE, STAMPED PATTERN AND COLOR. ALL CONCRETE SHALL BE CLASS 1, 5000 PSI, WITH 5% ENTRAINED AIR AND FIBER MESH ADDED PER MANUFACTURERS RECOMMENDATIONS.
10. PAVING SHALL BE PERFORMED BETWEEN MAY 15 AND OCTOBER 15 - UNLESS SPECIFICALLY APPROVED, IN WRITING, BY THE TOWN.
11. A PERMIT MUST BE OBTAINED FROM THE PUBLIC WORKS DIRECTOR PRIOR TO COMMENCING WORK WITHIN ANY PUBLIC RIGHT-OF-WAY. 48 HOURS PRIOR TO TRENCH EXCAVATION, THE PERMITEE MUST NOTIFY THE TOWN EXCAVATION PERMIT INSPECTOR.
12. UNDERGROUND SERVICE ALERT (USA) AND TOWN OF MAMMOTH LAKES (760 934-BLDG) SHALL BE NOTIFIED A MINIMUM OF 2 WORKING DAYS PRIOR TO START OF WORK.
13. PRIOR TO EXCAVATION, THE OUTLINE OF THE TRENCH SHALL BE VERTICALLY CUT FULL DEPTH THROUGH THE EXISTING ASPHALT SURFACE WITH A SAW, OR AN ASPHALT SPADE OR EQUIPMENT APPROVED BY THE ENGINEER.
14. CARE SHALL BE EXERCISED TO PREVENT SLOUGHING AND OVERBREAK. IF THE TRENCH SLOUGHS, THE SURFACE SHALL BE WIDENED WITH NEW SAW CUT LINES CUT AT LIMITS PER ABOVE NOTE 3, TO A MINIMUM DISTANCE OF 6 INCHES BEYOND ANY SLOUGHING TO ELIMINATE THE UNDERMINED SECTION OF ASPHALT.
15. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF THE TEMPORARY PATCH, AND IS RESPONSIBLE FOR PLACEMENT OF A PERMANENT PATCH WITHIN 30 DAYS OF COMPLETION OF THE UNDERGROUND WORK, OR AS SPECIFIED IN THE PERMIT. SEE STANDARD DETAIL DRAWING 201 FOR PERMANENT BITUMINOUS PATCH SPECIFICATIONS.
16. COMPACTION OF BACKFILL, BASE AND A.C. TEMPORARY PATCH SHALL BE PERFORMED WITH APPROVED MECHANICAL TAMPERS. EQUIPMENT WHEEL ROLLING IS NOT PERMITTED.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



A.C. TRENCH PATCH

PUBLIC WORKS
DIRECTOR APPROVAL: 

DATE: **May 7, 2014**

STANDARD PLAN

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17. ENTIRE AREA SHALL BE CLEANED DAILY OF ALL DIRT, DUST, DEBRIS, ETC. BEFORE LEAVING SITE. ANY SITE LEFT UNCLEAN MAY BE CLEANED BY THE TOWN AND ALL COSTS BACK-CHARGED TO THE PERMITEE.
18. TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE CALTRANS TRAFFIC MANUAL CHAPTER 5. TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, LATEST EDITION.
19. TEMPORARY PAVEMENT STRIPING SHALL BE PLACED FOR THOSE AREAS WHERE STRIPING HAS BEEN OBLITERATED.
20. UTILITIES PLACED FROM 0 TO 2 FEET FROM THE EDGE OF PAVEMENT SHALL HAVE A MINIMUM OF 42 INCHES OF COVER. SHALLOWER DEPTHS ARE SUBJECT TO SNOW POLE DAMAGE. UTILITY COMPANY IS RESPONSIBLE FOR ANY AND ALL DAMAGE FROM SNOW POLE INSTALLATION.
21. CONCRETE CURB, GUTTER, AND SIDEWALK SHALL BE REPLACED IN KIND PER SECTION 100. NEW CONCRETE SHALL HAVE 4 DOWELS INTO EXISTING CONCRETE SPACED 12" OC. ALL CONCRETE JOINTS SHALL BE SAWCUT AT EXPANSION OR GROOVED JOINTS.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



A.C. TRENCH PATCH

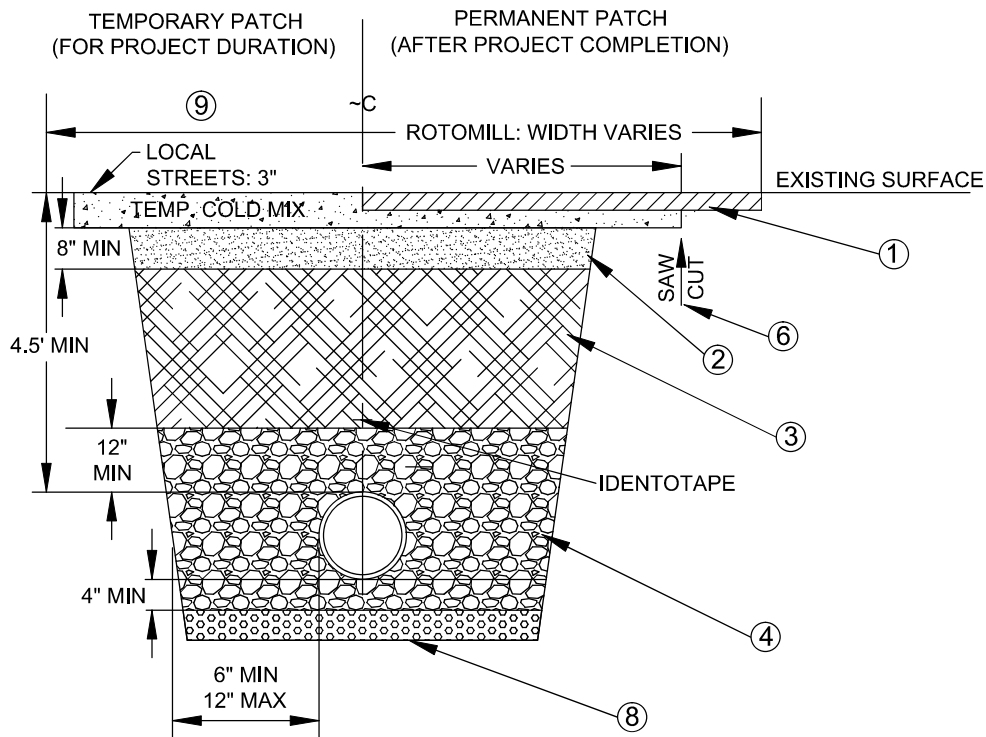
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DIRECTOR APPROVAL: _____

DATE: May 7, 2014

STANDARD PLAN

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CONSTRUCTION NOTES FOR A.C. TRENCH PATCH:

1. PERMANENT AC INSTALLATION:
 - A. ROTOMILL MINIMUM 2 INCHES DEEP TO COVER ALL AREAS OF CRACKED OR RAVELED SURFACES DISTURBED BY TRENCHING.
 - B. TACK COAT SC-3000 AND/OR HOT MIX IF FULLY CURED OR IF CONDITIONS WARRANT ON ALL EDGES AND MILLED SURFACES.
 - C. AC PAVEMENT SHALL CONFORM TO STANDARD 006-0 OF THESE STANDARDS.
2. AGGREGATE BASE PER STANDARD 006 OF THESE STANDARDS. BASE SHALL NOT BE REQUIRED WHEN USING CONCRETE SLURRY FOR BACKFILL.
3. TRENCH BACKFILL SHALL BE PER TOWN STANDARD 202-0, OR IMPORTED FILL AS APPROVED BY PUBLIC WORKS DIRECTOR. NATIVE MATERIAL AND IMPORTED FILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY PER ASTM D 1557.
4. PIPE BEDDING SHALL BE GRANULAR MATERIAL (3/4 INCH MAX) COMPACTED TO 90% PER ASTM D-1557 OR SLURRY. ALL BEDDING SHALL HAVE A NON-WOVEN GEOTEXTILE ON ALL SIDES.
5. TRANSVERSE: FOR ALL STREETS, THE TRENCH WIDTH SHALL BE TRENCH WIDTH PLUS 9 INCH (EACH SIDE) OR 24 INCH MINIMUM TOTAL PATCH WIDTH, WHICHEVER IS GREATER.
6. SAW CUT EDGE SHALL BE PARALLEL OR PERPENDICULAR TO TRENCH (TYP.).
7. PAVEMENT PATCH DEPTH IS TO MATCH CONTIGUOUS PAVEMENT, BUT NOT LESS THAN 3 INCHES (5-1/2 INCHES ON ARTERIAL AND COLLECTOR STREETS).
8. OVER EXCAVATE WHEN TRENCH BOTTOM IS SATURATED. REPLACE WITH 3-6 INCH ROCK TO A MIN 6 INCH DEPTH. WRAP WITH NON-WOVEN CLASS 3 (AASHTO M288 96) GEOTEXTILE ON ALL SIDES.
9. A MINIMUM 2 INCH THICK TEMPORARY PATCH OF COLD MIX ASPHALT CONCRETE SHALL BE PLACED AND COMPACTED IMMEDIATELY AFTER COMPLETION OF UNDERGROUND WORK OR AT END OF THE WORKDAY, OR COVERED WITH PLATING AS APPROVED BY THE EXCAVATION PERMIT INSPECTOR OR APPLICABLE ENGINEER OF RECORD. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFILLING, THE TOWN MAY PATCH AND BACK-CHARGE THE PERMITEE FOR ALL COSTS. TEMPORARY PATCH SHALL BE SET TO BETWEEN 1/8 AND 1/4 INCHES ABOVE EXISTING SURFACE.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



A.C. TRENCH PATCH

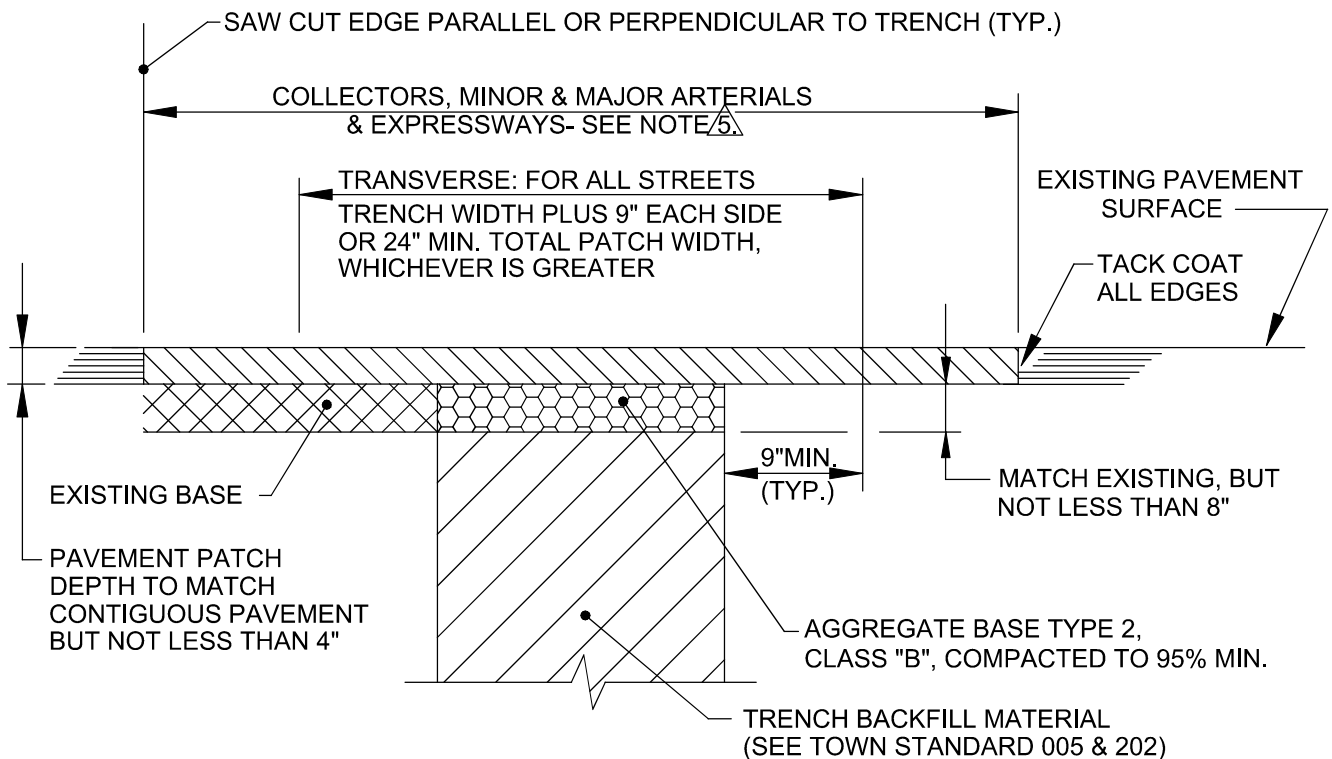
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DATE: May 7, 2014

STANDARD PLAN

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PERMANENT BITUMINOUS PAVEMENT PATCH

NOTES:

1. A PERMIT MUST BE OBTAINED FROM THE PUBLIC WORKS DIRECTOR PRIOR TO CUTTING ANY PUBLIC RIGHT-OF-WAY. 24 HOURS PRIOR TO TRENCH EXCAVATION, THE PERMITTEE MUST NOTIFY THE PUBLIC WORK INSPECTOR OR APPLICABLE ENGINEER OF RECORD.
2. ALL PERMANENT PATCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, THROUGHOUT THE DURATION OF THE WARRANTY IN ACCORDANCE WITH MUNICIPAL CODE CHAPTER 1204.
3. IF SAW CUT IS WITHIN 2 FEET OF AN EXISTING PAVEMENT EDGE OR EXISTING PAVEMENT PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
4. ALL A.C. REPLACEMENT REQUIREMENTS ARE MINIMUM WIDTHS ONLY. THE PUBLIC WORKS DIRECTOR MAY REQUIRE WIDER PATCH SECTIONS OR OTHERWISE ALTER THESE REQUIREMENTS.
5. LONGITUDINAL TRENCH PATCH WIDTH:
FOR COLLECTORS, MINOR AND MAJOR ARTERIALS AND EXPRESSWAYS: IF SAW CUT EDGES FOR LONGITUDINAL OR TRANSVERSE EXCAVATIONS FALL WITHIN A TRAVEL LANE, SAW CUT SHALL BE EXTENDED TO, AND REMOVAL MADE TO EDGE OF THE TRAVEL LANE, OR THE FULL DEPTH PATCH SHALL BE MADE PER THE SPECIFICATIONS FOR TRANSVERSE PATCHES AND THE ENTIRE TRAVEL LANE ROTOMILLED TO A DEPTH OF TWO INCHES AND OVERLAYED WITH TWO INCHES OF BITUMINOUS PLANT MIX AS DIRECTED BY THE ENGINEER.
6. EDGE OF 4 INCH ROCK WHEEL TRENCHES FOR CONDUIT SHALL BE LOCATED A MINIMUM OF 9 INCHES FROM GUTTER LIP AND SHALL BE PATCHED AS PER THE ABOVE DETAIL.
7. AGGREGATE BASE AND BITUMINOUS PAVEMENT SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST REVISION.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF LOOP DETECTORS, ADJUSTMENT OF UTILITIES AND SURVEY MONUMENTS TO GRADE AND INSTALLATION OF TEMPORARY PAVEMENT MARKERS.
9. FOR P.C.C. CURB REPLACEMENT, SAW CUT EXISTING PAVEMENT 18 INCHES MIN. FROM GUTTER LIP LINE, REMOVE AND REPLACE PAVEMENT TO SAW CUT EDGES. CONCRETE MAY BE POURED NEAT AGAINST EXISTING EDGE OF ASPHALT IF APPROVED BY THE PUBLIC WORKS DIRECTOR.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



A.C. TRENCH PATCH

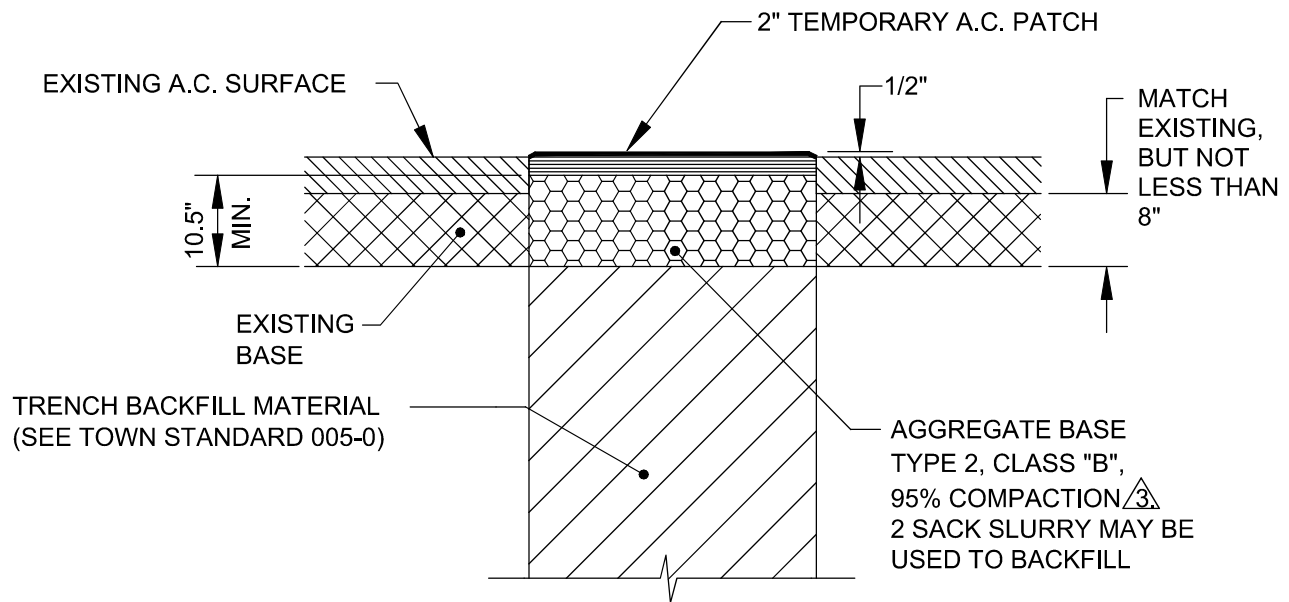
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DATE: May 7, 2014

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TEMPORARY A.C. TRENCH PATCH

NOTES:

1. PRIOR TO EXCAVATION, THE OUTLINE OF THE TRENCH SHALL BE VERTICALLY CUT FULL DEPTH THROUGH THE EXISTING ASPHALT SURFACE WITH A SAW, OR AN ASPHALT SPADE OR EQUIPMENT APPROVED BY THE PUBLIC WORKS DIRECTOR
2. CARE SHALL BE EXERCISED TO PREVENT SLOUGHING AND OVERBREAK. IF THE TRENCH SLOUGHS, THE SURFACE SHALL BE WIDENED TO ELIMINATE THE UNDERMINED SECTION OF ASPHALT
- ³ TYPE 2, CLASS "B", AGGREGATE BASE SHALL BE COMPACTED TO A THICKNESS OF AT LEAST 10-1/2 INCHES OR A DEPTH OF 8 INCHES BELOW THE BOTTOM OF THE EXISTING PAVEMENT, WHICHEVER IS GREATER. 2 SACK SLURRY MAY BE USED TO BACKFILL.
4. A TEMPORARY PATCH OF COLD MIX ASPHALT CONCRETE SHALL BE PLACED AND COMPACTED. THE COMPACTED PATCH SHALL BE APPROXIMATELY 1/8 TO 1/4 INCHES ABOVE THE LEVEL OF THE ADJACENT PAVEMENT. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFILLING, THE TOWN MAY PATCH AND BACK-CHARGE THE PERMITTEE FOR ALL COSTS.
5. COMPACTION OF BACKFILL, BASE AND A.C. TEMPORARY PATCH SHALL BE PERFORMED WITH APPROVED MECHANICAL TAMPERS. EQUIPMENT WHEEL ROLLING IS NOT PERMITTED.
6. ENTIRE AREA SHALL BE CLEANED OF ALL DIRT, DUST, DEBRIS, ETC. BEFORE LEAVING SITE. ANY SITE LEFT UNCLEAN WILL BE CLEANED BY THE TOWN AND ALL COSTS BACK-CHARGED TO THE PERMITTEE.
7. A PERMIT MUST BE OBTAINED FROM THE PUBLIC WORKS DIRECTOR PRIOR TO CUTTING ANY PUBLIC RIGHT-OF-WAY. 24 HOURS PRIOR TO TRENCH EXCAVATION, THE PERMITTEE MUST NOTIFY THE PUBLIC WORKS INSPECTOR OR APPLICABLE ENGINEER OF RECORD.
8. ALL EXCAVATIONS SHALL BE COMPLETE OR BACKFILLED AT THE END OF THE DAY OR COVERED WITH PLATING AS APPROVED BY THE PUBLIC WORKS INSPECTOR OR APPLICABLE ENGINEER OF RECORD.
9. TEMPORARY PATCH WORK AND PATCH MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PERMITTEE.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



A.C. TRENCH PATCH

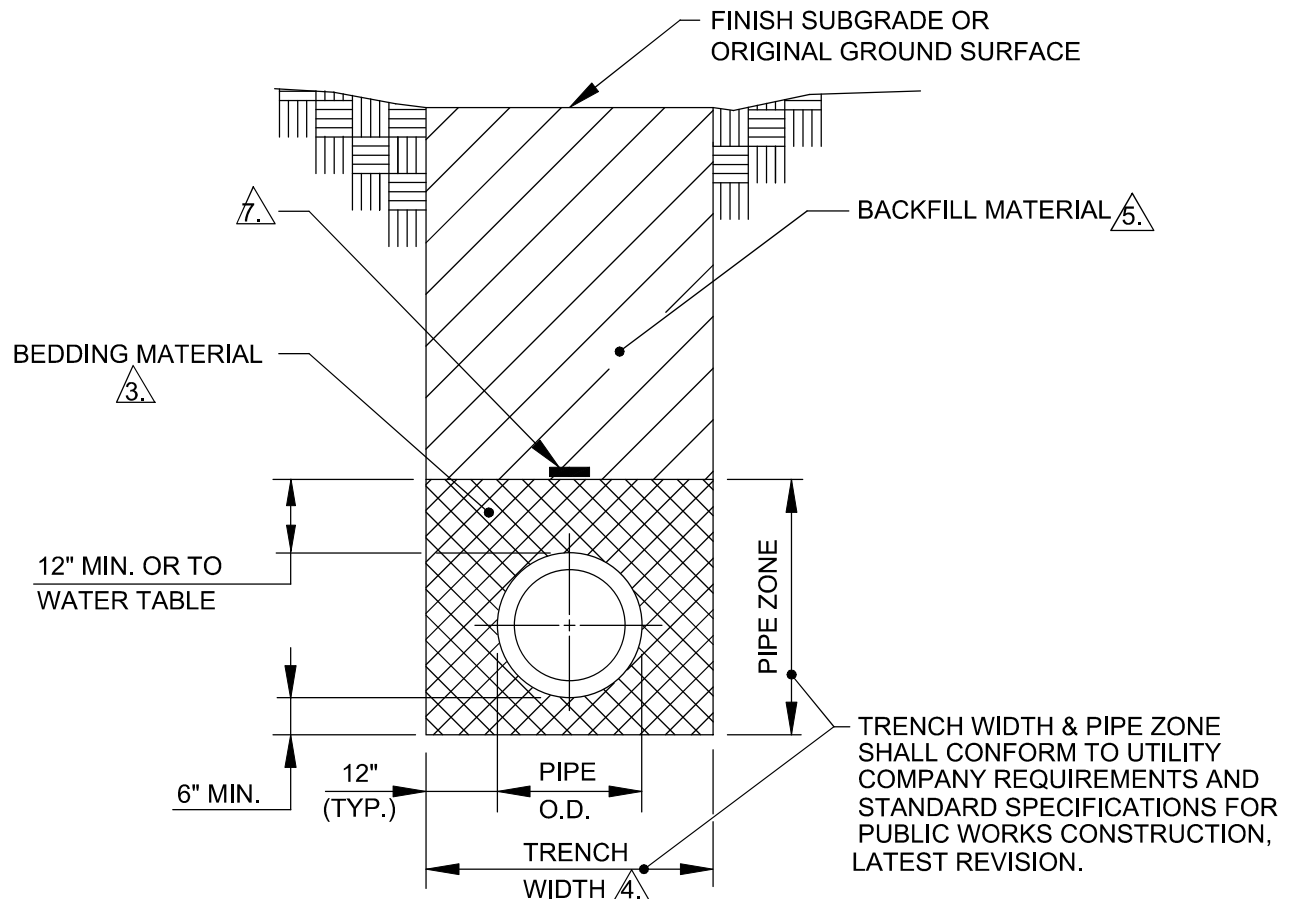
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DATE: May 7, 2014

STANDARD PLAN

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NOTES

1. A PERMIT MUST BE OBTAINED FROM THE PUBLIC WORKS DIRECTOR PRIOR TO CUTTING ANY PUBLIC RIGHT-OF-WAY. 24 HOURS PRIOR TO TRENCH EXCAVATION, THE PERMITTEE MUST NOTIFY THE TOWN PUBLIC WORKS DIRECTOR INSPECTOR OR APPLICABLE ENGINEER OF RECORD.
2. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST REVISION.
3. BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE TOWN. FOR TOWN-OWNED UTILITIES, BEDDING MATERIAL SHALL BE COMPACTED TO 90% MINIMUM. FOR TRAFFIC/ELECTRICAL CONDUIT TRENCHES LESS THAN 12 INCHES IN WIDTH, INCLUDING VERMIER TRENCHES, BEDDING SHALL BE APPROVED SCREENED 3" MINUS MATERIAL. BACKFILL SHALL BE CEMENT SLURRY (ONE SACK). CEMENT SLURRY BEDDING/BACKFILL MAY BE USED AS AN ALTERNATE BACKFILL MATERIAL WITH WRITTEN APPROVAL FROM THE TOWN ENGINEER FOR EACH SPECIFIC APPLICATION.
4. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS. SHORING OR SLOPED CUT MAY BE NECESSARY, BUT THERE WILL BE NO PAYMENT FOR ADDITIONAL EXCAVATION, BEDDING, BACKFILL, OR SHORING.
5. SEE TOWN STANDARD 005 FOR TRENCH BACKFILL SPECIFICATIONS.
6. EDGE OF 4 INCH ROCK WHEEL TRENCHES FOR CONDUIT SHALL BE LOCATED A MINIMUM OF 9 INCHES FROM GUTTER LIP.
7. PIPE TAPE IDENTIFICATION OF UTILITY SHALL BE INSTALLED.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



TRENCH EXCAVATION / BACKFILL

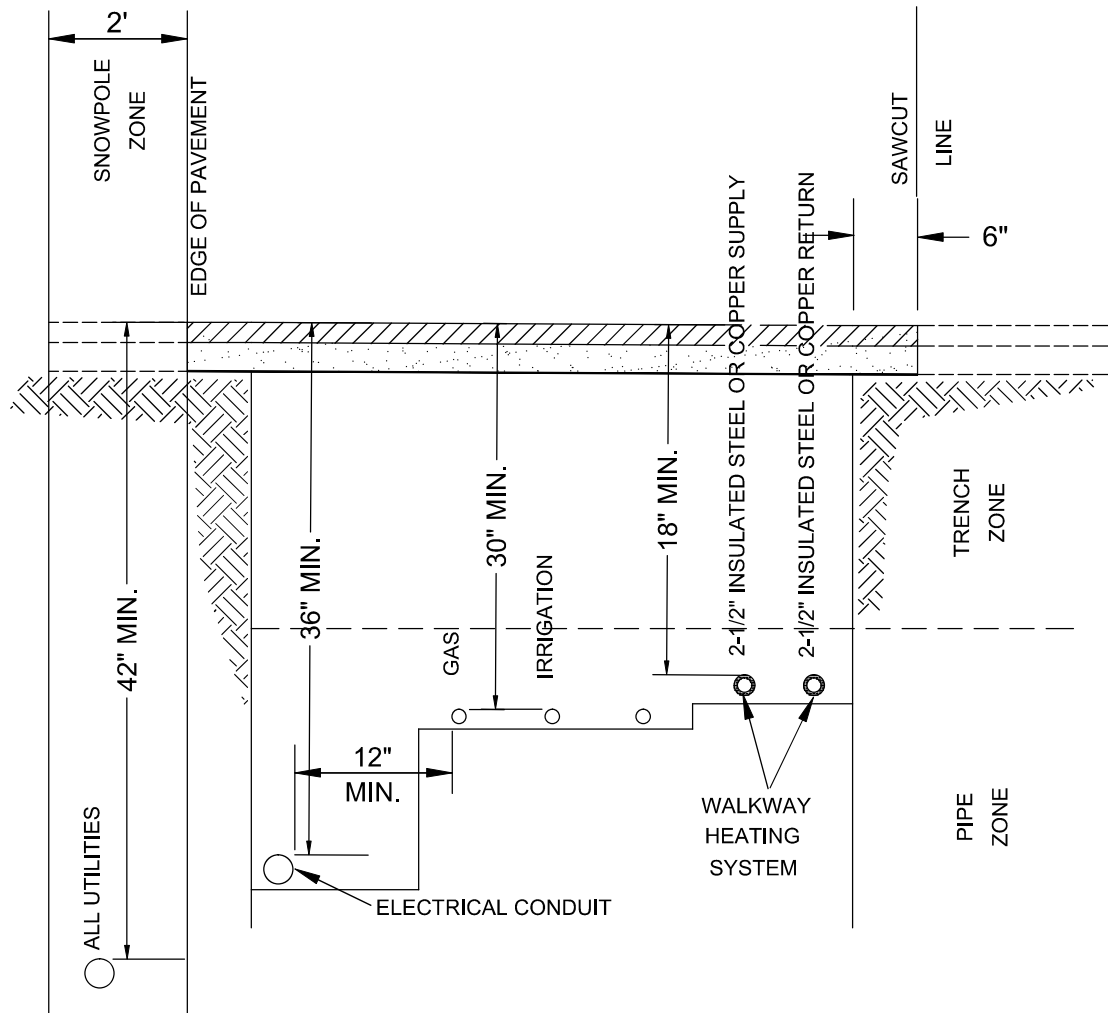
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DATE: May 7, 2014

STANDARD PLAN

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SHEET 2 OF 2



UTILITY LOCATIONS
NTS

GENERAL NOTES FOR UTILITY LOCATIONS

1. FOREIGN OBJECTS OR DEBRIS ARE NOT PERMITTED IN COMPLETED TRENCH.
2. NO ROCKS ARE ALLOWED WITHIN 12 INCHES OF DIRECT BURIED CABLES OR ANY DUCT WITHOUT CONCRETE ENCASEMENT. NATIVE BACKFILL CAPABLE OF PASSING THROUGH A 1/2 INCH MESH SCREEN SHALL BE CONSIDERED TO BE "ROCK-FREE".
3. ALL BACKFILL SHALL PASS THROUGH A 1/2 INCH SCREEN, OR PLACE IMPORTED SAND 3 INCHES BELOW AND 6 INCHES ABOVE BURIED CABLES (PIPE ZONE).
4. ALL NON-METALIC PIPES SHALL HAVE WIRE AND TAPE.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



UTILITY LOCATIONS

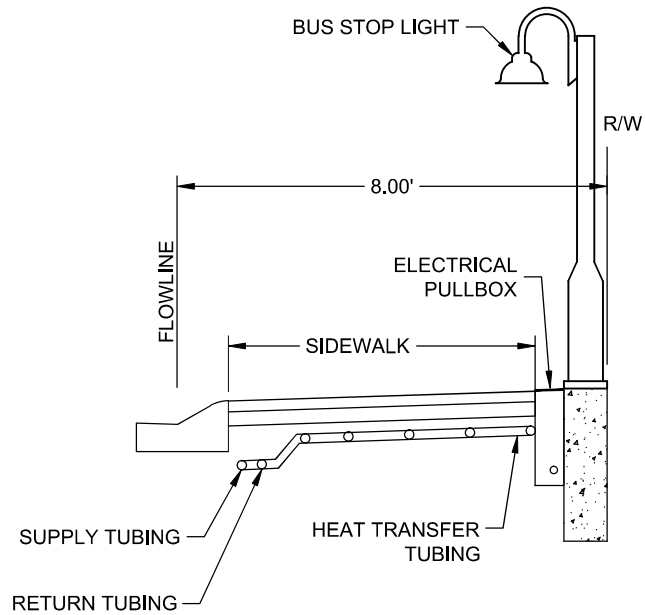
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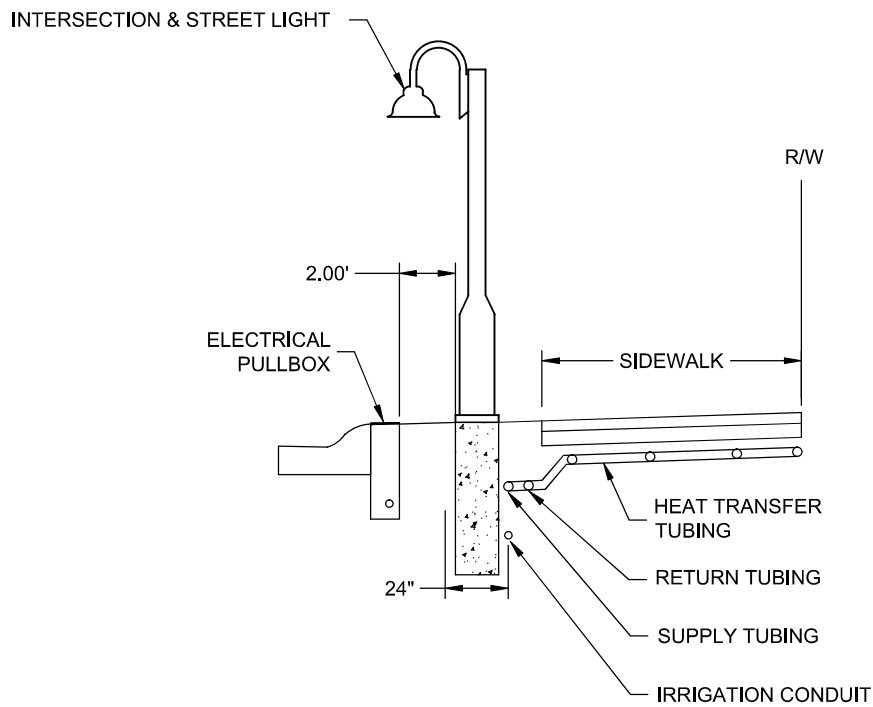
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TYPICAL UTILITY SECTION
BUS STOP, PARKING & RIGHT TURN LANES



TYPICAL UTILITY SECTION

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



UTILITY LOCATIONS

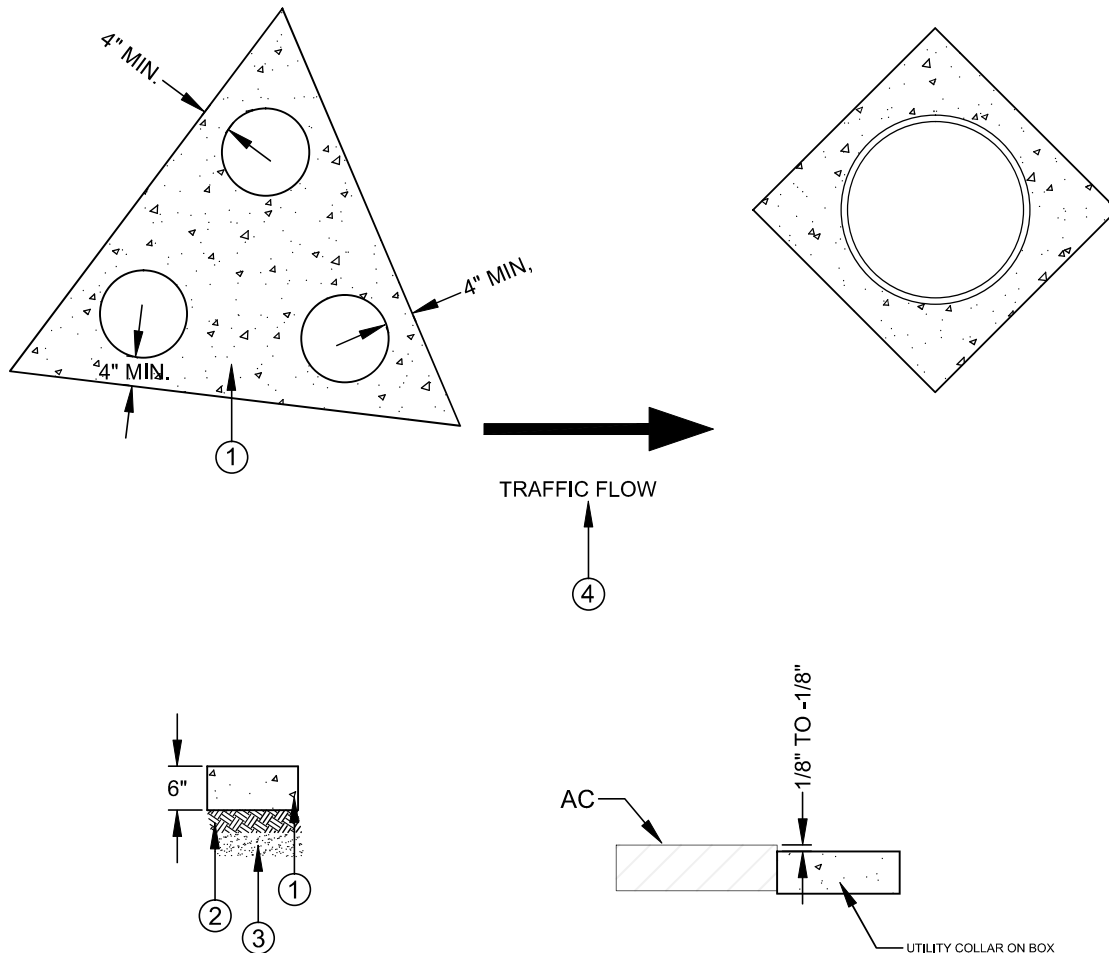
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○ GENERAL NOTES FOR UTILITY COLLAR

1. CONCRETE SHALL BE PER TOWN STANDARD PLAN 004, OR AS APPROVED BY THE PUBLIC WORKS DIRECTOR.
2. 6 INCH CLASS II AGGREGATE BASE, COMPACTED TO 95% RELATIVE DENSITY.
3. PREPARED SUBGRADE - SUBGRADE SHALL BE AT OPTIMUM MOISTURE AND COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION.
4. PLACE CONCRETE SUCH THAT NO EDGES ARE PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



UTILITY COLLAR

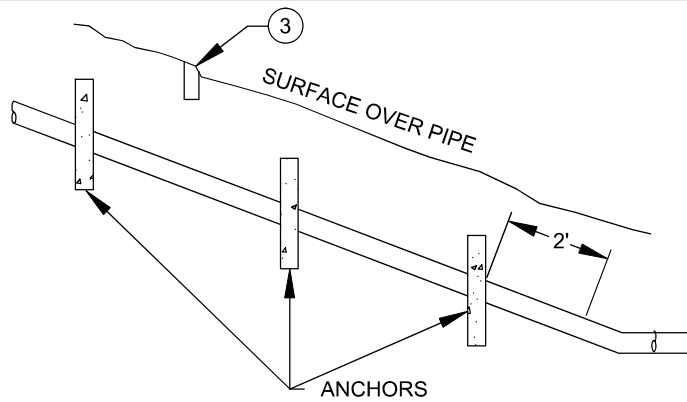
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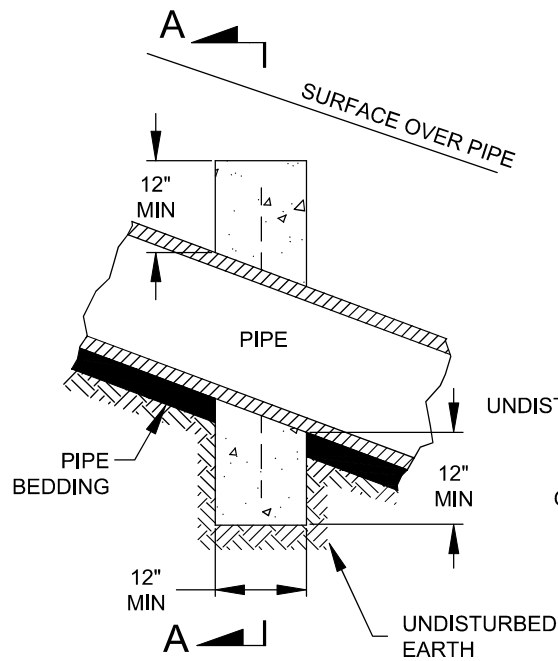
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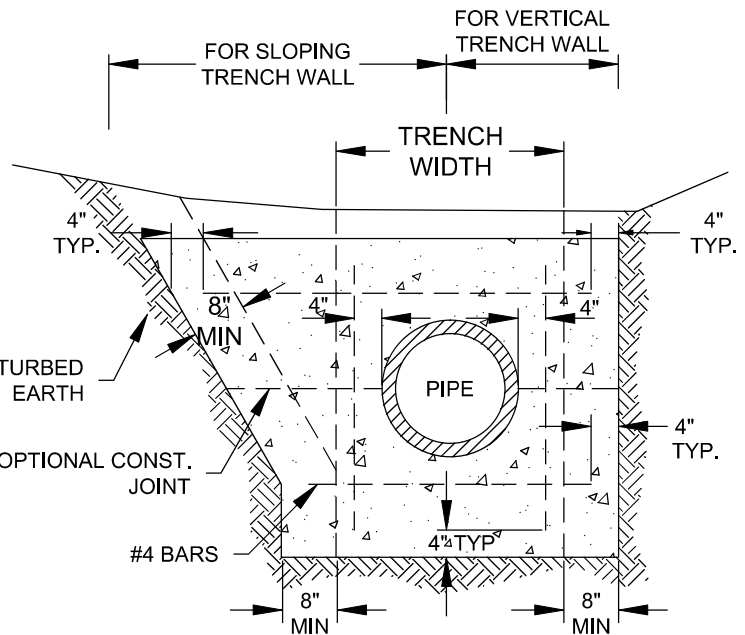
SHEET 1 OF 1



ELEVATION PIPE ANCHORS



PLAN VIEW AT ANCHOR



SECTION A-A

NOTES

1. CONCRETE SHALL BE PER TOWN STANDARD 004 OR AS APPROVED BY THE PUBLIC WORKS DIRECTOR.
2. ANCHORS SHALL BE CONSTRUCTED AT 7' VERTICAL INTERVAL.
3. 2x12 PRESSURE TREATED BOARD PLACED AT ALTERNATE ANCHOR SPACING TACKED AND BURIED FLUSH WITH EXISTING SURFACE.
4. TRENCH SHALL BE BACKFILLED PER TOWN OF MAMMOTH LAKES STANDARDS.
5. PIPES/CONDUITS ON 20 PERCENT SLOPES OR GREATER SHALL BE ANCHORED SECURELY WITH CONCRETE ANCHORS, SPACED AS FOLLOWS:
 - a. NOT OVER 36 FEET CENTER TO CENTER ON GRADES 20 PERCENT AND UP TO 35 PERCENT.
 - b. NOT OVER 24 FEET CENTER TO CENTER ON GRADES 35 PERCENT AND UP TO 50 PERCENT.
 - c. NOT OVER 16 FEET CENTER TO CENTER ON GRADES 50 PERCENT AND OVER.

TOWN OF MAMMOTH LAKES - DEPARTMENT OF PUBLIC WORKS



PIPE ANCHORS AND
BACKFILL STABILIZERS

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