

SANITARY SEWER NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION," WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, CURRENT EDITION, TOGETHER WITH THE LATEST EDITION OF THE CITY OF MOUNTLAKE TERRACE ENGINEERING STANDARDS.
- AN APPROVED COPY OF THESE PLANS MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY IN CITY RIGHT-OF-WAY.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CITY OF MOUNTLAKE TERRACE ENGINEERING DEPARTMENT (776-1161) MUST BE CONTACTED FOR A PRECONSTRUCTION MEETING.
- ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION SERVICE (1-800-424-5555) PRIOR TO CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE IMMEDIATELY CONTACTED IF A UTILITY CONFLICT EXISTS.
- THE SANITARY SEWER SYSTEM SHALL BE CONSTRUCTED ACCORDING TO THE APPROVED PLANS WHICH ARE ON FILE IN THE CITY OF MOUNTLAKE TERRACE ENGINEERING DEPARTMENT. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL FROM THE PROPER AGENCY.
- ALL NEW SANITARY SEWER LINES SHALL BE SEALED OFF AT THE EXISTING TRUNK CONNECTION POINT UNTIL ALL UPSTREAM CONSTRUCTION IS COMPLETED, CLEANED, TESTED, LAMPED, AND ACCEPTED BY THE CITY OF MOUNTLAKE TERRACE. ALL CONSTRUCTION DEBRIS AND WATER SHALL BE REMOVED FROM PIPE PRIOR TO OPENING SEAL. AT THE END OF THE PROJECT AND PRIOR TO ACCEPTANCE, ALL SANITARY SEWER LINES SHALL BE INSPECTED BY TV VIEWING, RECORDED ON VHS VIDEO TAPE, AND SUBMITTED TO THE CITY AS A PERMANENT RECORD.
- MANHOLE AND LIDS:
 - ALL MANHOLES SHALL BE MOUNTLAKE TERRACE STANDARD PLAN NO. 305 (TYP.) TYPE, WITH ECCENTRIC CONE.
 - OUTSIDE DROP CONNECTIONS SHALL BE CONSTRUCTED IN CONFORMANCE TO MOUNTLAKE TERRACE STANDARD PLAN NO. 308.
 - ALL MANHOLES SHALL HAVE A MINIMUM DROP OF 0.10 FEET BETWEEN INVERTS.
 - ALL MANHOLES NOT IN PAVED AREAS SHALL HAVE LOCKING LIDS.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL MANHOLE TOPS TO MATCH FINAL ASPHALT ELEVATIONS AND GROUND ELEVATIONS IN LANDSCAPED AREAS.
- SEWER PIPE, BEDDING, AND TRENCH COMPACTION:
 - ALL SEWER PIPE SHALL BE ONE OF THE FOLLOWING:
 - P.V.C., CONFORMING WITH A.S.T.M. D-3034, SDR
 - DUCTILE IRON, CLASS 50, CONFORMING TO A.W.W.A. C151.
 - PIPE MAY BE ANY OF THE ABOVE PROVIDED:
 - ADJOINING PIPE LENGTHS MUST BE OF THE SAME MATERIALS AND BE PROVIDED WITH RUBBER GASKET JOINTS.
 - WHERE A PIPE MATERIAL IS SPECIFICALLY SHOWN ON THE PLAN, THAT MATERIAL MUST BE USED.
 - PIPE BEDDING SHALL CONFORM TO SECTION 7-17.3(1)B, STANDARD SPECIFICATIONS. BEDDING MATERIAL SHALL CONFORM TO SECTION 9-03.15.
 - TRENCH BACKFILL SHALL BE COMPACTED TO A MINIMUM 95% DRY OPTIMUM DENSITY PER A.S.T.M. D-1557-70 (MODIFIED PROCTOR) PRIOR TO TESTING SEWER LINES FOR ACCEPTANCE.
- SIDE SEWER LATERALS:
 - SIDE SEWERS SHALL BE 6" MINIMUM DIAMETER WITH 1.0% MINIMUM SLOPE.
 - SIDE SEWERS SHALL BE TESTED FOR LEAKAGE AT THE SAME TIME THE MAIN LINE SEWER IS TESTED. IF NOT TESTED TOGETHER, PROVIDE TEST TEES AT SEWER CONNECTIONS.
 - BUILDINGS WITH GREATER THAN 10 UNITS SHALL BE SERVICED BY ONE OF THE FOLLOWING METHODS:
 - SINGLE 8" DIAMETER SERVICE WITH CLEANOUT CONNECTED TO TRUNK INTO MANHOLES ONLY.
 - ALTERNATE CONNECTIONS METHODS IN COMPLIANCE WITH "CRITERIA FOR SEWAGE DESIGN", WASHINGTON STATE DEPARTMENT OF ECOLOGY.
 - ALL LATERAL CONNECTIONS TO SEWER MAINS SHALL BE MADE WITH A WYE OR SLEEPING TEE. WHERE NO TEE, WYE, OR RISER IS AVAILABLE, USE AN APPROVED SADDLE FOR SEWER CONNECTION.
 - CLEANOUTS MUST BE PROVIDED AT THE RIGHT-OF-WAY FOR LATERALS EXTENDING FROM CITY OWNED MAINS. ALL CLEANOUTS MUST BE BROUGHT TO THE SURFACE IN ACCORDANCE WITH STANDARD PLAN #303.

- CONSTRUCTION OF DEWATERING SYSTEMS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 7-17.3(1)A.
- WHENEVER SEWERS MUST CROSS UNDER WATER MAIN THE SEWER SHALL BE LAID AS SPECIFIED IN "CRITERIA FOR SEWAGE DESIGN", WASHINGTON STATE DEPARTMENT OF ECOLOGY.
- BUILDINGS SHALL NOT BE PERMITTED WITHIN 10 FEET, OR CARPORTS WITHIN 5 FEET, OF THE SPRING LINE OF ANY SANITARY SEWER MAIN. SIDE SEWERS 6" DIAMETER OR LESS MAY BE LOCATED WITHIN 30' OF A STRUCTURE PROVIDED THAT THE SOIL SUPPORT PRISM IS NOT DISTURBED FOR THE ADJACENT FOUNDATION.
- PRIOR TO OCCUPANCY, THE DEVELOPER SHALL GRANT NECESSARY SANITARY SEWER EASEMENTS TO THE CITY OF MOUNTLAKE TERRACE. THE WIDTH SHALL EQUAL THE NOMINAL DEPTH TO THE INVERT, BUT SHALL NOT BE LESS THAN 10'.
- AN AS BUILT SANITARY SEWER DRAWING SHALL BE SUBMITTED FOR ALL DEVELOPMENTS, SHORT PLATS AND SUBDIVISIONS.
- ALL SEWERS SHALL BE DESIGNED AND CONSTRUCTED TO GIVE MEAN VELOCITIES, WHEN FLOWING FULL, OF NOT LESS THAN 2 FEET PER SECOND.
- SANITARY SEWER PIPE BEDDING AND TRENCH BACKFILL SHALL CONFORM WITH STD. PLAN NO. 304.
- ALL EXISTING SANITARY SEWER SERVICES WHICH ARE LOCATED DURING CONSTRUCTION SHALL BE CAPPED AT THE PROPERTY LIMITS. CONTRACTOR TO REMOVE AND DISPOSE OF ABANDONED PIPE.

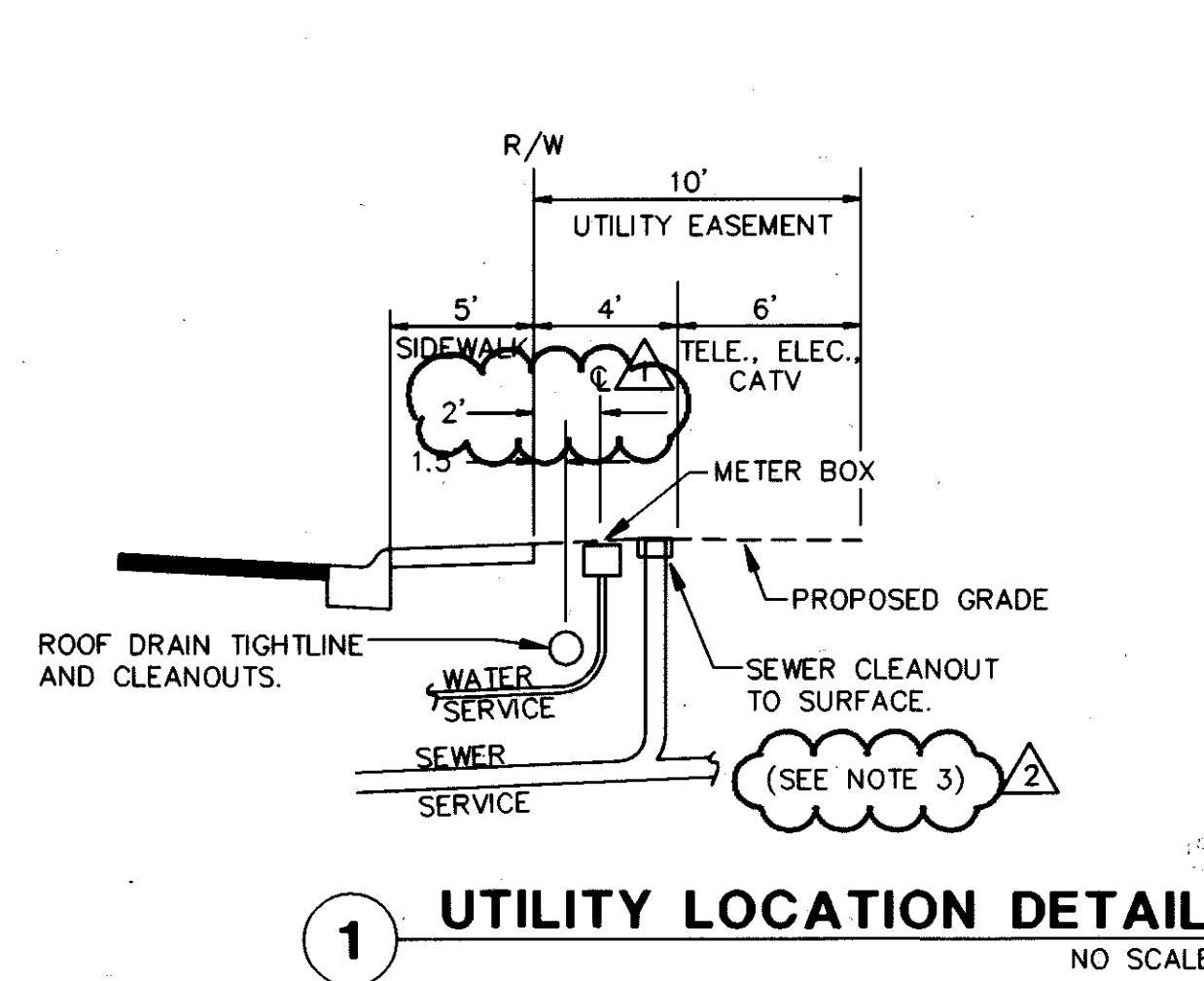
RECOMMENDED GUIDELINES FOR SEWER CONSTRUCTION THROUGH WETLAND AREA (PER JUNE 10, 1995 WETLAND DESIGNER REPORT)

- THE MOST IMPORTANT CONSIDERATION IS TO PRESERVE THE EXISTING HYDRIC SOIL. HYDRIC SOIL SHOULD BE STOCKPILED WHEN REMOVED AND THEN RE-LAID OVER THE DISTURBED AREAS WHEN UTILITIES ARE COMPLETE.
- MINIMAL EQUIPMENT OPERATION SHOULD TAKE PLACE IN THE WETLAND AREA, ONLY THAT ABSOLUTELY NECESSARY FOR CONSTRUCTION. EQUIPMENT SHOULD BE CONFINED TO THE TRENCH EXCAVATION CORRIDOR ONLY.
- ORANGE BARRIER FENCING SHOULD BE USED TO CLEARLY DELINEATE THE CONSTRUCTION AREA, NOT TO EXCEED 15 FEET IN WIDTH FROM THE EAST PROPERTY LINE.
- FILTER FENCING SHOULD ALSO BE INSTALLED ON THE EASTERN BOUNDARY OF THE CONSTRUCTION AREA.
- ONCE CONSTRUCTION IS COMPLETE AND HYDRIC SOIL HAS BEEN REPLACED, THE PROPOSED VEGETATION AS INDICATED ON THE WETLAND MITIGATION PLAN SHOULD BE INSTALLED WITHIN THE WETLAND AND BUFFER AREA. DISTURBED AREAS OUTSIDE THE WETLAND AND BUFFER AREA SHOULD BE HYDROSEEDDED ALONG WITH OTHER DISTURBED AREAS ON-SITE.

WATER NOTES

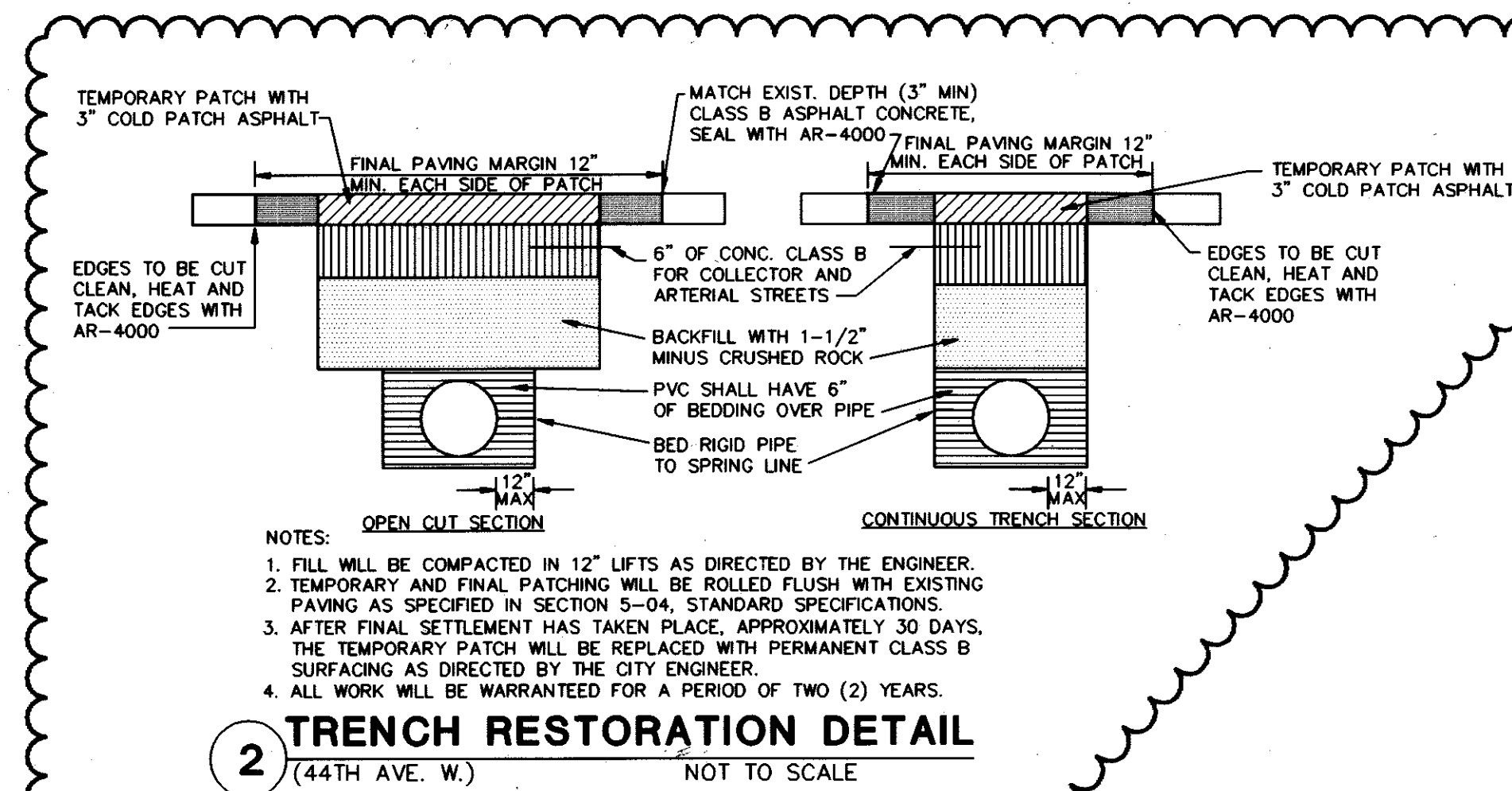
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- AN APPROVED COPY OF THESE PLANS MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY IN CITY RIGHT-OF-WAY.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CITY OF MOUNTLAKE TERRACE ENGINEERING DEPARTMENT (776-1161) MUST BE CONTACTED FOR A PRECONSTRUCTION MEETING.
- ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION SERVICES (1-800-424-5555) PRIOR TO CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE IMMEDIATELY CONTACTED IF A UTILITY CONFLICT EXISTS.
- THE WATER MAIN DISTRIBUTION SYSTEM SHALL BE CONSTRUCTED ACCORDING TO THE APPROVED PLANS WHICH ARE ON FILE ON THE CITY OF MOUNTLAKE TERRACE ENGINEERING DEPARTMENT. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL FROM THE PROPER AGENCY.
- CONNECTIONS TO EXISTING FACILITIES SHALL BE SEALED OFF UNTIL CONSTRUCTION IS COMPLETED. NO CONNECTIONS WILL BE ALLOWED UNTIL THE NEW WATER MAINS HAVE PASSED ALL PRESSURE AND PURITY TESTS.

- WATER MAIN PIPE, BEDDING AND TRENCH COMPACTION:
 - ALL WATER MAIN PIPE TO BE CEMENT LINED, CLASS 52 DUCTILE IRON, CONFORMING TO STANDARD SPECIFICATION 9-30.1(1). CEMENT MORTAR LINING AND SEAL COATING SHALL CONFORM TO ANSI/AWWA C110/A21.10-82, OR LATEST REVISION.
 - PIPE JOINTS TO BE PUSH-ON, MECHANICAL OR FLANGE JOINTS.
 - ALL WATER MAIN PIPE FITTINGS TO BE CEMENT LINED, CLASS 250 CAST IRON, CONFORMING TO ANSI/AWWA C100/A21.10-82, OR LATEST REVISION.
 - PIPE BEDDING SHALL CONFORM TO SECTION 7-10.3(9)A, AND PIPE BEDDING MATERIALS SHALL CONFORM TO SECTION 9-03.15, STANDARD SPECIFICATIONS.
 - ALL WATER MAIN CEMENT CONCRETE THRUST BLOCKS TO CONFORM TO STANDARD DETAILS SHOWN ON THE PLANS.
 - ALL WATER MAIN TRENCH BACKFILL SHALL BE COMPACTED TO MINIMUM 95% DRY OPTIMUM DENSITY PER A.S.T.M. D-1557-70 (MODIFIED PROCTOR) PRIOR TO TESTING WATER MAINS FOR ACCEPTANCE.
- MAINTAIN A MINIMUM COVER OF 36" OVER FINISHED GRADE ON ALL WATER MAIN PIPE. WHERE UTILITY CONFLICTS OCCUR, OTHER THAN SANITARY SEWER WATER MAINS ARE TO BE LOWERED TO CLEAR. SEE "CRITERIA FOR SEWAGE DESIGN", WASHINGTON STATE DEPARTMENT OF ECOLOGY FOR SEWER CONFLICTS.
- ALL WATER MAINS SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE WASHINGTON STATE HEALTH DEPARTMENT AND CITY OF MOUNTLAKE TERRACE STANDARD PLAN NO. 209. ALL INSPECTION AND PRESSURE TESTING SHALL BE DONE IN THE PRESENCE OF, AND UNDER THE SUPERVISION OF, THE CITY ENGINEER AND/OR HIS REPRESENTATIVE.
- CONTRACTOR TO PROVIDE PLUGS AND/OR TEMPORARY BLOW-OFF ASSEMBLIES FOR TESTING AND PURITY ACCEPTANCE PRIOR TO FINAL TIE IN.
- ALL GATE VALVES TO BE RESILIENT SEATED AND SHALL BE MANUFACTURED TO MEET OR EXCEED THE REQUIREMENTS OF A.W.W.A. STANDARD C-509, OR LATEST REVISION.
- FIRE HYDRANTS:
 - ALL FIRE HYDRANTS SHALL CONFORM TO THE CITY OF MOUNTLAKE TERRACE STANDARD PLAN NO. 201.
 - ALL FIRE HYDRANT PORTS SHALL FACE PERPENDICULAR TO CURB AND TOWARD DRIVEWAY AS SHOWN ON THE PLANS.
- WATER MAIN SERVICES:
 - ALL WATER MAIN SERVICE LINES TO BE TYPE "K" COPPER. SERVICE CONNECTIONS SHALL BE IN ACCORDANCE WITH CITY OF MOUNTLAKE TERRACE STANDARD PLAN NO. 202 OR NO. 203 (DOUBLE STRAPS AND CORPORATION STOPS).
 - WATER METERS 2" AND SMALLER TO BE SUPPLIED AND INSTALLED BY THE CITY OF MOUNTLAKE TERRACE.
- THE WATER MAIN SHALL BE SET A MINIMUM OF 5 FEET TOWARD THE ROADWAY CENTERLINE FROM THE CURB. BUILDINGS SHALL NOT BE PERMITTED WITHIN 10 FEET, OR CARPORTS WITHIN 5 FEET, OF THE SPRING LINE OF ANY WATER MAIN WHERE APPLICABLE, UNLESS OTHERWISE SHOWN ON THE PLANS.
- ALL WATER MAINS NOT IN PUBLIC RIGHT-OF-WAY REQUIRE 10 FOOT WIDE EASEMENTS TO THE CITY OF MOUNTLAKE TERRACE.
- ALL VALVES, EXISTING AND NEW, SHALL BE OPERATED ONLY BY THE CITY OF MOUNTLAKE TERRACE. NO EXCEPTIONS!
- A STATE APPROVED BACKFLOW PREVENTION DEVICE MUST BE INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SYSTEMS, INDUSTRIAL WATER SYSTEMS, AND ANY OTHER WATER CONNECTION THAT MAY HAVE A POSSIBILITY OF A CROSS CONTAMINATION CONNECTION AS DETERMINED BY A CERTIFIED CROSS CONNECTION TECHNICIAN.
- CONSTRUCTION OF DEWATERING SYSTEMS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 7-11.3(1).
- AN AS BUILT WATER PLAN SHALL BE SUBMITTED FOR ALL DEVELOPMENTS, SHORT PLATS AND SUBDIVISION.
- ALL TAPPING SLEEVES SHALL BE MJ FULL CIRCUMFERENTIAL GASKETED STAINLESS STEEL OR AS DESIGNATED BY THE CITY ENGINEER.
- THE CITY SHALL BE GIVEN 72 HOURS NOTICE PRIOR TO SCHEDULING AN EXISTING MAIN SHUTDOWN. CONNECTION POINTS TO EXISTING MAINS SHALL BE EXPOSED BY THE CONTRACTOR AND FITTINGS VERIFIED 48 HOURS PRIOR TO DISTRIBUTING SHUTDOWN NOTICES.
- TRAFFIC CONTROL SHALL BE REQUIRED IN ACCORDANCE WITH THE 1994 STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PUBLISHED BY W.S.D.O.T. AND A.P.W.A. FLAGGERS AND OTHER TRAFFIC CONTROL DEVICES SHALL BE EMPLOYED AS NECESSARY DURING CONSTRUCTION, AND AT A MINIMUM ONE LANE SHALL BE KEPT OPEN AT ALL TIMES ALONG 44TH AVENUE W.
- WATER SERVICES WHICH PROVIDED SERVICE TO STRUCTURES EXISTING ON-SITE PRIOR TO DEVELOPMENT, SHALL BE REMOVED TO THE CORPORATION STOP.



NOTES:

- WATER METERS AND SAN. SEWER CLEANOUTS - CENTER WITHIN 4' ESMT. AREA.
- SEE MOUNTLAKE TERRACE STD. PLANS 202 FOR WATER SERVICE DETAILS AND STD. PLAN 302 & 303 FOR SAN. SEWER CLEANOUT REQUIREMENTS.
- EXTEND SANITARY SEWER SERVICE 12 FEET MINIMUM BEYOND R-O-W.



NOTES:

- FILL WILL BE COMPACTED IN 12" LIFTS AS DIRECTED BY THE ENGINEER.
- TEMPORARY AND FINAL PATCHING WILL BE ROLLED FLUSH WITH EXISTING PAVING AS SPECIFIED IN SECTION 5-04, STANDARD SPECIFICATIONS.
- AFTER FINAL SETTLEMENT HAS TAKEN PLACE, APPROXIMATELY 30 DAYS, THE TEMPORARY PATCH WILL BE REPLACED WITH PERMANENT CLASS B SURFACING AS DIRECTED BY THE CITY ENGINEER.
- ALL WORK WILL BE WARRANTED FOR A PERIOD OF TWO (2) YEARS.

CALL 48 HOURS
BEFORE YOU DIG
1-800-424-5555

24 HOUR NOTICE
REQUIRED PRIOR TO NEED FOR
INSPECTION. CALL 24 HOUR REQUEST LINE
775-9694

CITY OF MOUNTLAKE TERRACE
APPROVED PLAN

DATE: 12-1-95

BY: *[Signature]*
(EXCEPT WHERE NOTED) SUBJECT TO FIELD
INSPECTION AND COMPLIANCE TO ALL
APPLICABLE LAWS, CODES, ORDINANCES,
STANDARDS AND SPECIFICATIONS OF THE
CITY OF MOUNTLAKE TERRACE, WASHINGTON

GROUP FOUR, Inc.

16030 JUANITA-WOODVILLE WAY NE
BOTHELL, WASHINGTON 98011
(206) 775-4561 • (206) 362-4244 • FAX (206) 362-3819

SURVEYING ENGINEERING PLANNING MANAGEMENT
DRAWN BY: GST CHECKED BY: DATE: 11-94
APPROVED BY: DATE:

MELANIE LANE
SANITARY SEWER AND WATER
NOTES & DETAILS

WASHINGTON

MOUNTLAKE TERRACE

SHT 10 OF 11

JOB NO: 91-5009

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