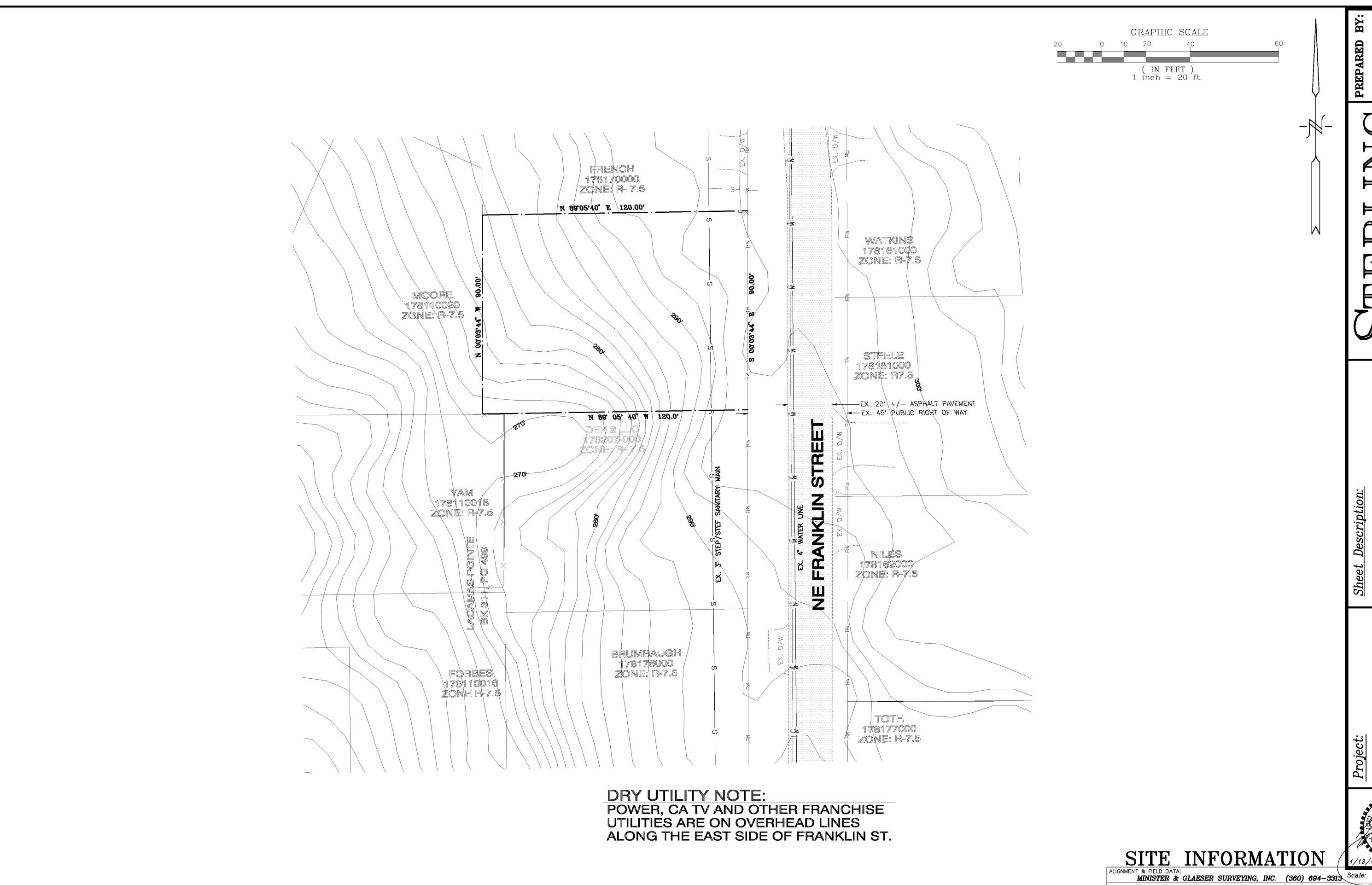
FRANKLIN DUPLEX PRE APPLICATION: GRAPHIC SCALE A Preliminary Site within a portion of the SW 1/4 of Sec. 35, T2N., R3E., W.M. Clark County, Washington ·PA16-24 PREPARED (IN FEET) 1 inch = 20 ft. PERMITS REQUESTED: CONDITIONAL USE PERMIT TYPE II CONDITIONAL USE PERMIT GENERAL APPLICATION FRENCH 178170000 ZONE: R- 7.5 WATKINS 178161000 ZONE: R-7.5 MOORE 178110020 ZONE: R-7.5 PROPOSED VICINITY MAP DUPLEX PROPERTY OWNER: TIMBER GROVE LLC 1625 NW IVY STREET CAMAS WA, 98607 RESIDENCE STEELE 178181000 ZONE: R7.5 CONTACT: JOEL STIRLING
STERLING DESIGN, INC.
2208 E. EVERGREEN BLVD.
VANCOUVER, WA 98661
PH.: (360) 759-1794
FAX: (360) 759-4983
EMAIL: Joel@SterlingDesign.biz SHEET TREET ZONE: R-7.5 SITE INFORMATION: - AREA: 0.25 ACRES TAX LOT: 119 YAM NACIN - SERIAL NUMBER: 178211-000 178110018 - SITE ADDRESS: 4055 NE FRANKLIN ST, CAMAS, 98607 **ZONE: R-7.5** - COMPREHENSIVE PLAN: SFM SHEET INDEX COVER SHEET 178162000 EXISTING CONDITIONS PLAN **ZONE: R-7.5 BOUNDARY SURVEY** SITE PLAN GRADING & EROSION CONTROL PLAN 60 UTILITY CONNECTIONS PLAN GENERAL NOTES: EXAMPLE RESIDENTIAL DUPLEX PLANS DETAILS SHEET 1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2006 EDITION OF THE WSDOT/APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL DETAILS SHEET CONSTRUCTION AND STANDARD DETAIL SHEETS ATTACHED HERE IN. DETAILS SHEET BRUMBAUGH 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES, INCLUDING THE INVERT AND TOP ELEVATIONS AT CROSSING 178176000 LOCATIONS, PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY FORBES **ZONE:** R-7.5 CITY OF CAMAS 178110016 3. CONTRACTOR SHALL CALL CLARK COUNTY'S 24—HOUR UTILITY NOTIFICATION CENTER AT (360) 696—4848 OR (800) 553—4344 FOR UTILITIES LOCATE, A MINIMUM OF 48 HOURS PRIOR ZONE R-7.5 TO THE START OF CONSTRUCTION. 4. ALL EXISTING MONUMENTS, PROPERTY CORNERS AND SURVEY MARKERS SHALL BE PROTECTED. REPLACEMENT OF LOST, DESTROYED OR DAMAGED MARKERS SHALL BE DONE BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH R.C.W. 58.17 AT THE CONTRACTORS EXPENSE. DATE CITY ENGINEER 178177000 **ZONE: R-7.5** 5. THE CONTRACTOR SHALL NOT EXCAVATE OVER FOUR FEET IN DEPTH WITHOUT USING ADEQUATE SAFETY MEASURES. THE CONTRACTOR IS REFERRED TO TITLE 296 W.A.C., PART N DATE REVISION SHEETS INITIAL **AFFECTED APPROVAL** FOR EXCAVATION, TRENCHING AND SHORING REQUIREMENTS. 6. ALL UTILITIES SHALL HAVE A GRANULAR BACKFILL APPROVED BY THE CITY OF CAMAS. WATER SETTLEMENT OF UTILITY TRENCHES IS NOT ALLOWED. 7. ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE EROSION/SEDIMENT CONTROL PLAN AND CITY OF CAMAS EROSION/SEDIMENT CONTROL DETAILS PRIOR TO ANY CLEARING OR THE START OF ANY CONSTRUCTION. 8. IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A STOP WORK ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF. 9. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF CAMAS PUBLIC WORKS DEPARTMENT. APPROVAL SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. ALIGNMENT & FIELD DATA: MINISTER & GLAESER SURVEYING, INC. (360) 694-3313 Scale: HYDROLOGIC GROUP: SOIL TYPE(s): HIDNOL HCD & HCB 10. THE DEVELOPER/CONTRACTOR SHALL ARRANGE A PRE—CONSTRUCTION MEETING WITH THE CITY OF CAMAS ENGINEERING DEPARTMENT PRIOR TO COMMENCING ANY WORK. Project Number: **708** SOILS TESTING BY: Design/ JGS/BC 11. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS WILL REQUIRE A SUBMITTAL FROM THE APPLICANT'S ENGINEER AND APPROVAL FROM THE CITY OF CAMAS ENGINEERING DEPARTMENT. Existing utilities shown are approximate only from utility records and as visible at the site. Contractor shall verify presence, location, depth & slope of any and all existing utilities prior to construction. Contact One Call Concepts at (800) 424—5555. SITE LOCATION: CLARK COUNTY, WA Drawing Date: JAN. 2017 12. AN EROSION/SEDIMENT CONTROL BOND WILL BE REQUIRED BY THE CITY OF CAMAS PRIOR TO WORK COMMENCING. SITE AREA: 0.25 ACRES Sheet 1 of 10 Sheet(s) $S\: 708-Prelim.pro$

AS SHOWN



REFER TO SHEETS 4 FOR

SITE SURVEY INFORMATION

I/13/17

Scale: AS SHOWN

Project Number: 708

Design/ JGS/BC

FRANKLIN DUPLEX NORTH

SOIL TYPE(s): HYDROLOGIC GROUP: AASHTO CLASSIFICATION:

HCD & HCB C A-7

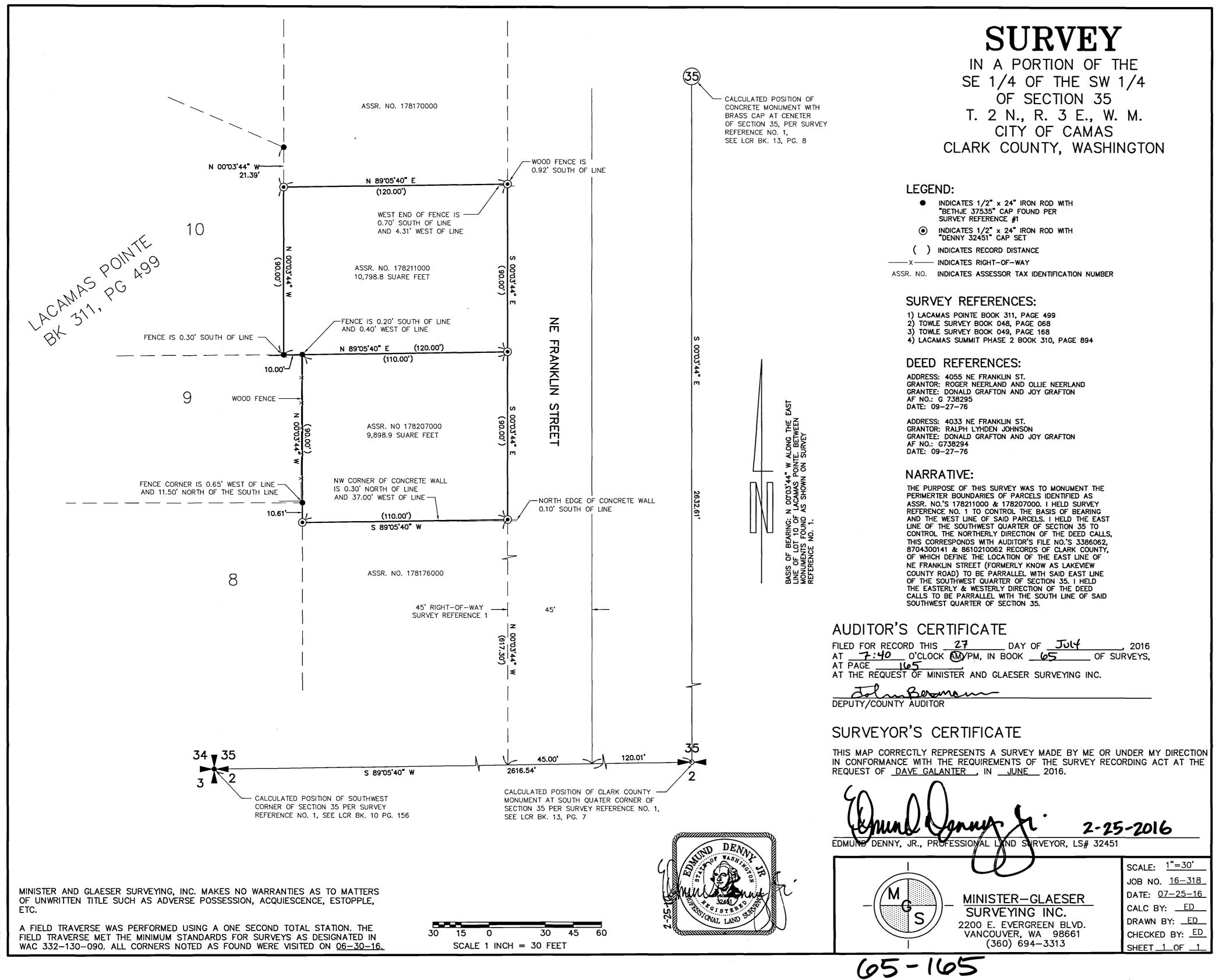
SOILS TESTING BY: DATE:

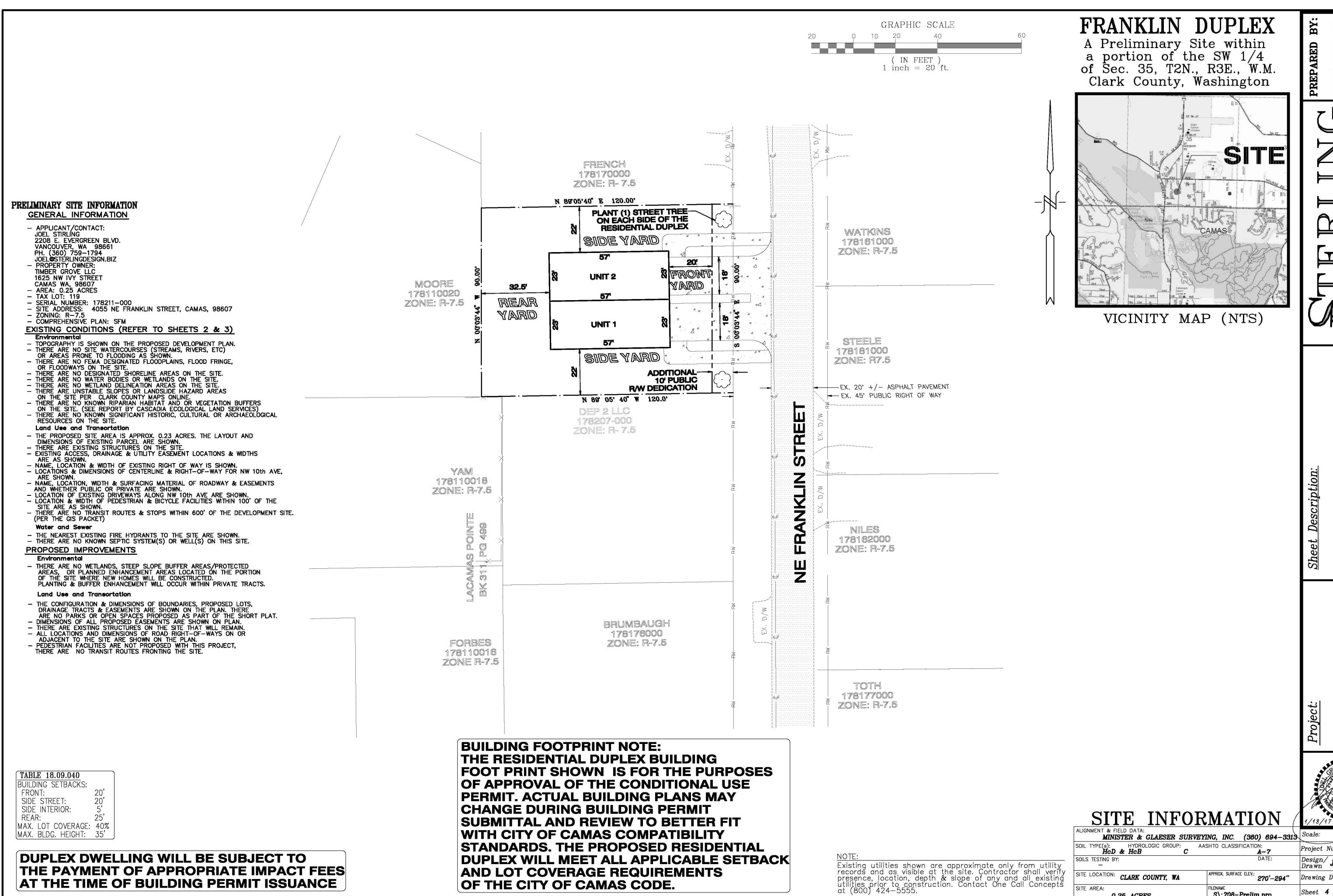
SITE LOCATION: CLARK COUNTY, WA

APPROX. SURFACE ELEV.: 270'-294"

0.25 ACRES

Existing utilities shown are approximate only from utility records and as visible at the site. Contractor shall verify presence, location, depth & slope of any and all existing utilities prior to construction. Contact One Call Concepts at (800) 424—5555.





OF THE CITY OF CAMAS CODE.

AT THE TIME OF BUILDING PERMIT ISSUANCE

STEE 2206 VAN(PH. FAX

SITE

RELI

NORT

SITE LOCATION: CLARK COUNTY, WA S\: 708-Prelim. pro 0.25 ACRES

Project Number: 708 Design/ JGS/BC

Drawing Date: JAN. 2017 Sheet 4 of 10 Sheet(s)

1. THE EROSION/SEDIMENT CONTROL (ESC) PLAN IS TO BE UTILIZED AS A GUIDE TO CONTROL THE TRANSPORT OF LOOSE SOILS TO THE PROPERTY OUTSIDE OF THE CONSTRUCTION AREA AND AROUND THE CONSTRUCTION SITE. THE ESC MEASURES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE

2. THE IMPLEMENTATION OF THE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THE ESC MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND PERMANENT VEGETATION/LANDSCAPING IS ESTABLISHED.

3. IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A STOP WORK. ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF.

4. THE CONTRACTORS SHALL BE RESPONSIBLE TO FAMILIARIZE THEMSELVES WITH THE CITY OF CAMAS EROSION/SEDIMENT CONTROL HANDBOOK AND THE STORMWATER MANUAL IN WASHINGTON STATE (LATEST EDITION), VOL. II.

5. ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO DISTURBING AND EXPOSING ANY SOIL SURFACES (I.E. CONSTRUCTION ENTRANCES, FILTER FABRIC/STRAWBALE SEDIMENT BARRIERS, AND SEDIMENTATION TRAPS) AND MAINTAINED FOR THE DURATION OF THE PROJECT. TRAPPED SEDIMENT IN EXCESS OF 1 FOOT SHALL BE REMOVED OR STABILIZED ON—SITE. DISTURBED SOIL AREAS RESULTING FROM VEGETATION REMOVAL SHALL BE PERMANENTLY STABILIZED. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

6. TO MINIMIZE EROSION AND SEDIMENTATION TRANSPORTATION, EARTHWORK SHALL NOT BE PERFORMED WHILE SOILS ARE MORE THAN 5% ABOVE OPTIMUM MOISTURE CONTENT

7. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE CLEARING LIMITS AND/OR ANY EASEMENTS, SENSITIVE OR CRITICAL AREAS, AND THEIR BUFFERS, TREES, AND DRAINAGE COURSES FLAGGED PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. FLAGGING LIMITS ARE TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

8. REMOVE ONLY THOSE TREES AND SHRUBS THAT NEED TO BE REMOVED FOR THE CONSTRUCTION OF ROADS, SIDEWALKS, UTILITIES, GRADING LIMITS AND STORMWATER

9. ALL ROAD EXISTING AND NEWLY CONSTRUCTED CATCH BASINS OR CURB INLETS AFFECTED BY CONSTRUCTION SHALL BE PROTECTED AGAINST SEDIMENT DEPOSITS. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM

10. ALL POLLUTANTS THAT OCCUR ON—SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER SYSTEM.

11. ALL DISTURBED SOIL SURFACES ARE TO BE STABILIZED BY A SUITABLE APPLICATION OF BEST MANAGEMENT PRACTICES. NO SOILS SHALL REMAIN UNSTABILIZED FOR MORE THAN TWO DAYS DURING THE PERIOD OF OCTOBER 1 THRU JULY 5. FROM JULY 5 THRU OCTOBER 1, NO SOIL SHALL REMAIN UNSTABILIZED FOR MORE THAN 7 DAYS. STABILIZATION OF DISTURBED SOIL AREAS CAN CONSIST OF HYDROSEEDING OR HAND—SEEDING, MULCHING, PLACEMENT OF EROSION CONTROL BLANKETS OR PLASTIC. ALL SEEDED AREAS ARE TO BE FERTILIZED, WATERED, AND MAINTAINED TO ENSURE THAT THE REGROWTH OF VEGETATION IS AS SOON AS POSSIBLE.

12. ALL TEMPORARY SEDIMENT AND EROSION CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POLICING THE JOB SITE DAILY AND MAINTAINING THE EROSION/SEDIMENT CONTROL MEASURES THROUGHOUT ALL PHASES OF CONSTRUCTION. AN INSPECTION LOG SHALL BE KEPT AND MADE AVAILABLE TO THE CITY OF CAMAS. THE POLICING AND MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO:

VERIFYING THAT ALL AREAS ARE GRADED SUCH THAT ALL RUNOFF IS DIRECTED TO A SEDIMENTATION DEVICE BEFORE DISCHARGE TO

SURFACE.

■ REMOVAL OF TRAPPED SILT AT SILT BARRIERS, SILT TRAPS, OR POINTS OF

ACCUMULATION.

■ ADDITIONAL PROTECTIVE MEASURES DUE TO JOB SITE OR WEATHER

CONDITIONS AS REQUIRED BY CITY OF CAMAS WATER QUALITY.

• MONITORING OF VEHICLES LEAVING THE SITE TO MINIMIZE TRANSMISSION

OF LOOSE SOILS TO THE PUBLIC ROADWAYS.

■ PLACING OF THE STRAWBALE SEDIMENTATION BARRIER AT THE ENTRANCE DURING PRECIPITATION OR AT THE END OF THE WORKDAY BEFORE

LEAVING THE SITE.

• VERIFY THAT ALL PROPERTIES ADJACENT TO THE PROJECT SITE ARE PROTECTED FROM SEDIMENTATION DEPOSITION. THIS MAY BE ACCOMPLISHED BY INSTALLING PERIMETER CONTROLS SUCH AS SEDIMENTATION BARRIERS, FILTERS OR DIKES, SEDIMENTATION

BASINS/TRAPS, OR BY A COMBINATION OF SUCH MEASURES.

14. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES SHALL BE STABILIZED IN ACCORDANCE WITH EROSION/SEDIMENT CONTROL NOTE 11. SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN TWO YEARS OF CONSTRUCTION MUST BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES. THESE MEASURES MAY CONSIST OF ROUGHENED SOIL SURFACES, INTERCEPTORS, DIVERSIONS OR TERRACES, TEMPORARY OR PERMANENT CHANNELS, ADDITIONAL VEGETATION, OR PIPE SLOPE DRAINS AS REQUIRED BY CITY OF CAMAS WATER QUALITY UNTIL THE PROBLEM IS CORRECTED.

15. THE ESC MEASURES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING UNDERGROUND

UTILITIES AS SPECIFIED BELOW:

• WHERE FEASIBLE, NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME.

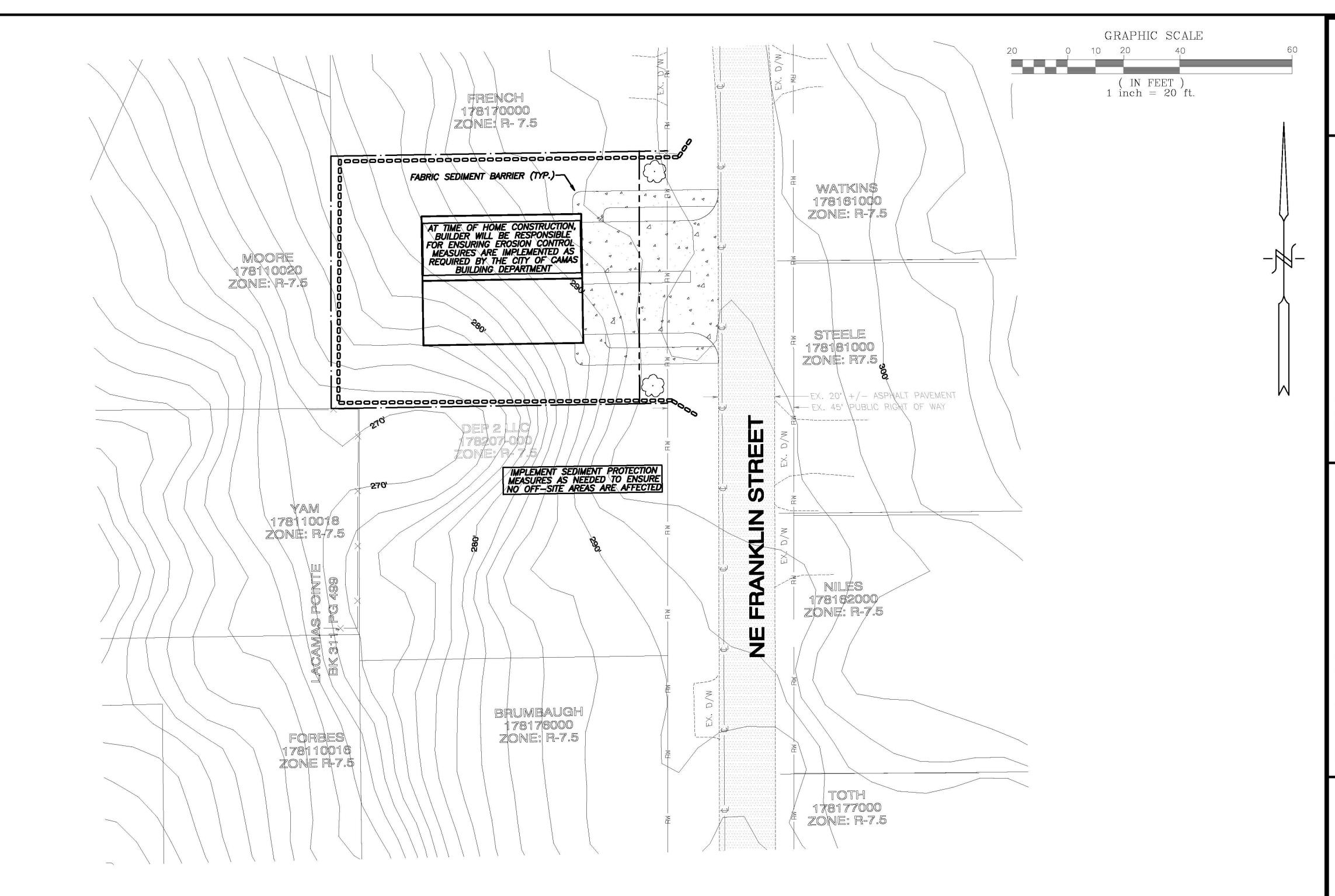
• WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS,

EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

■ TRENCH DE-WATER DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP OR SEDIMENT POND.

17. CONTRACTOR SHALL CONSULT WITH GEOTECHNICAL ENGINEER. DURING ALL GRADING ACTIVITIES FOR FIELD VERIFICATION OF FILL PLACEMENT AND SITE SPECIFIC GRADING RECOMENDATIONS. CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION FROM GEOTECHNICAL ENGINEER. FOR STRUCTURAL FILLS PRIOR TO ACCEPTANCE OF PROJECT BY CITY OF CAMAS.

18. SLOPES SHALL BE HYDRO—SEEDED AS SOON AS PROPOSED GRADES ARE ESTABLISHED. CONTRACTOR TO PREPARE SLOPES FOR SEED BY "TRACKING" SLOPES AS PER ATTACHED DETAIL.



EROSION PROTECTION SHALL BE PLACED ON ALL OFFSITE STORM STRUCTURES DOWNSTREAM OF THE SITE OR AS WILL BE AFFECTED BY SITE CONSTRUCTION (TYP.)

MINIMAL GROUND DISTURBANCE WILL TAKE PLACE ON THE PROPERTY AS PART OF THE RESIDENTIAL DUPLEX CONSTRUCTION AND WILL BE LIMITED TO THE MINIMUM REQUIRED FOR FOUNDATION INSTALLATION, DRIVEWAY CONSTRUCTION AND YARD CONTOURING.

IN THE EVENT THAT ANY ITEM OF ARCHAEOLOGICAL INTEREST IS UNCOVERED DURING THE COURSE OF A PERMITTED GROUND DISTURBING ACTION OR ACTIVITY, ALL GROUND DISTURBING ACTIVITIES SHALL IMMEDIATELY CEASE AND THE APPLICANT SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AND DAHP

NOTE:

Existing utilities shown are approximate only from utility records and as visible at the site. Contractor shall verify presence, location, depth & slope of any and all existing utilities prior to construction. Contact One Call Concepts at (800) 424—5555.

SITE INFORMATION
ALIGNMENT & FIELD DATA:

SCALE:

MINISTER & GLAESER SURVEYING, INC. (360) 694-3313

SCALE:

SOIL TYPE(s): HYDROLOGIC GROUP: AASHTO CLASSIFICATION: Project

HCD & HCB

SOILS TESTING BY: DATE: Design
Drawn

SITE LOCATION: CLARK COLDETY WAS APPROX. SURFACE ELEV.: Program.

SITE LOCATION: CLARK COUNTY, WA

SITE AREA:

O.25 ACRES

APPROX. SURFACE ELEV.:

270'-294"

FILENAME

S\: 708-Prelim.pro

Project Number: 708

Design / JGS/BC

Drawing Date: JAN. 2017

Sheet 5 of 10 Sheet(s)

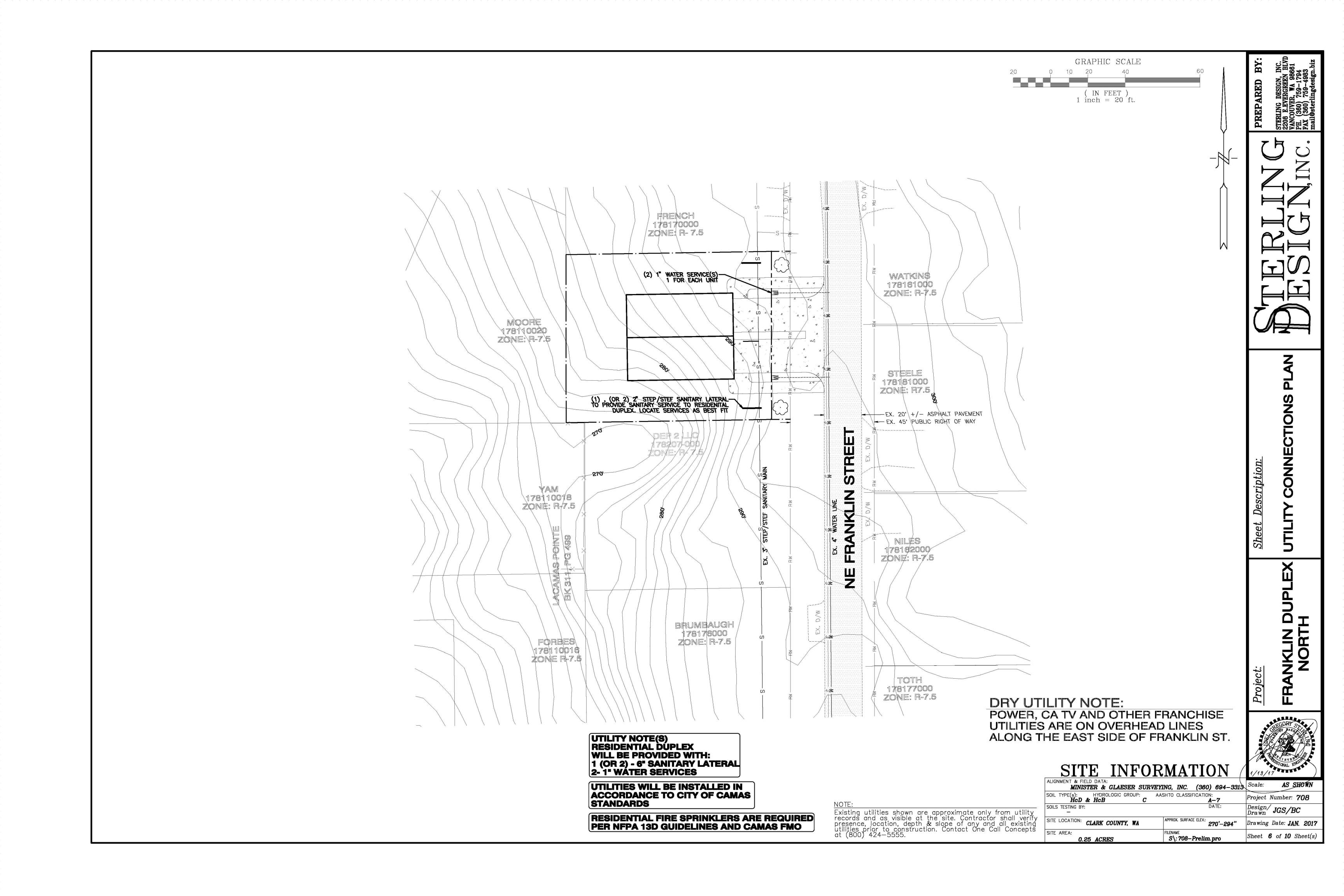
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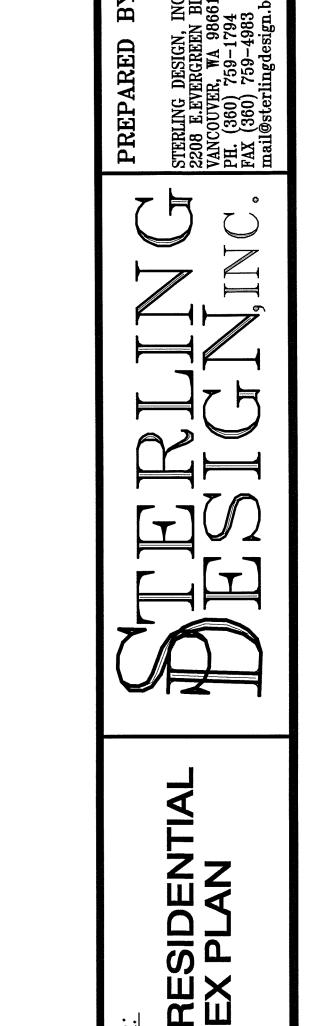
Sheet Description:

GRADING & ERC
CONTROL PL

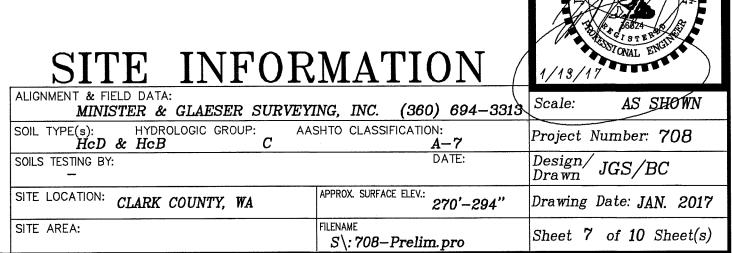
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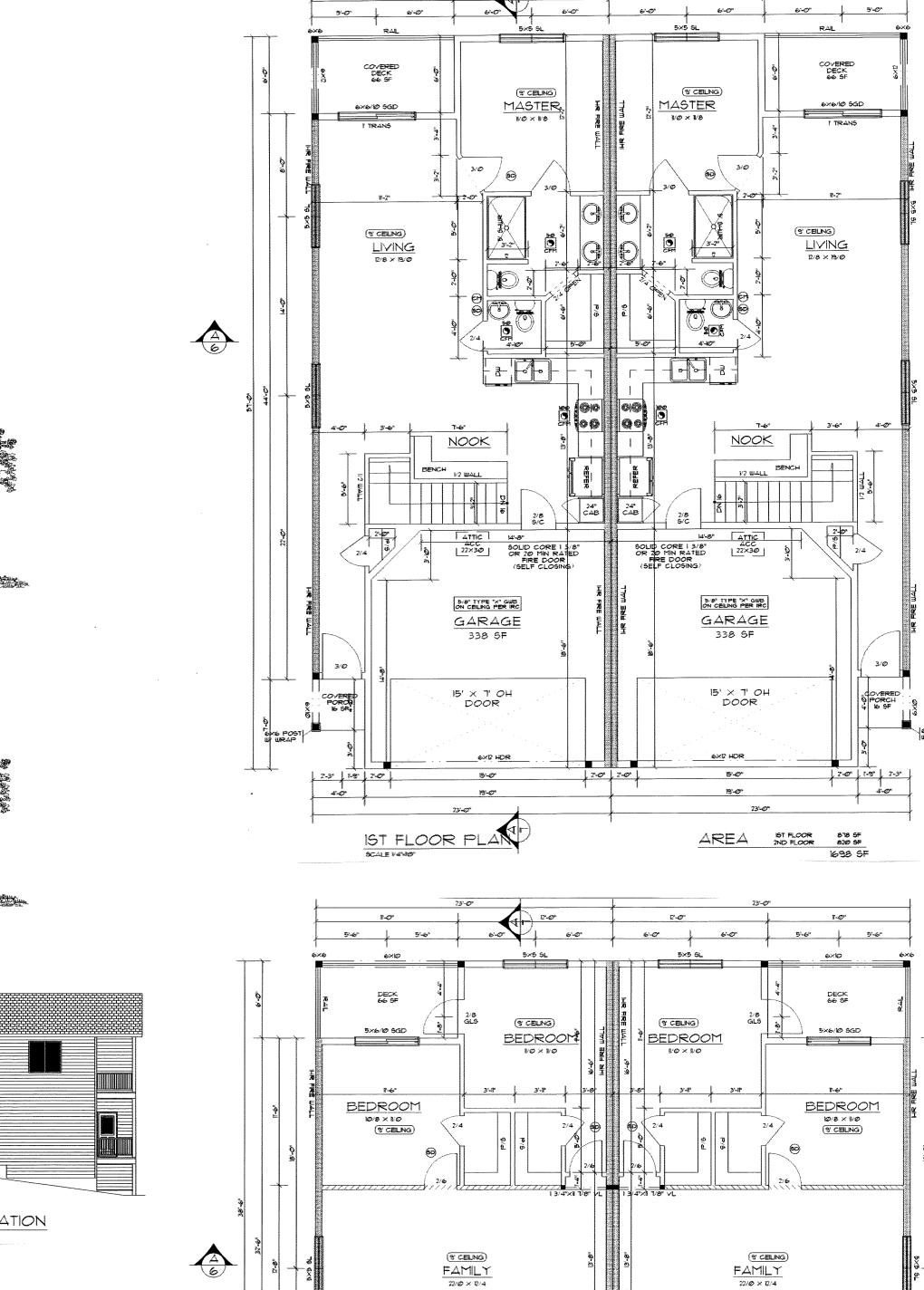




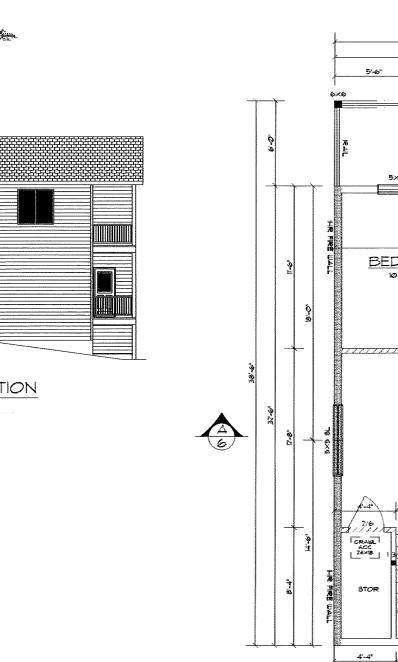
SOILS TESTING BY:

SITE AREA:

SITE LOCATION: CLARK COUNTY, WA



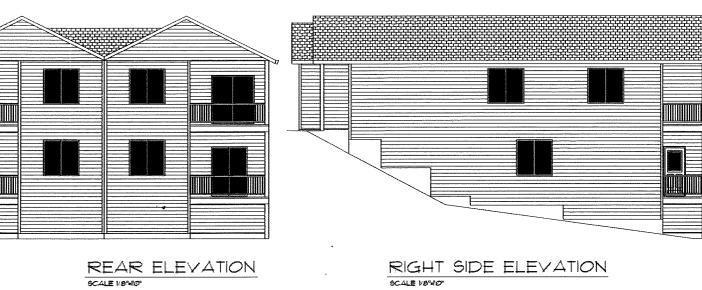
BASEMENT FLOOR PLAN



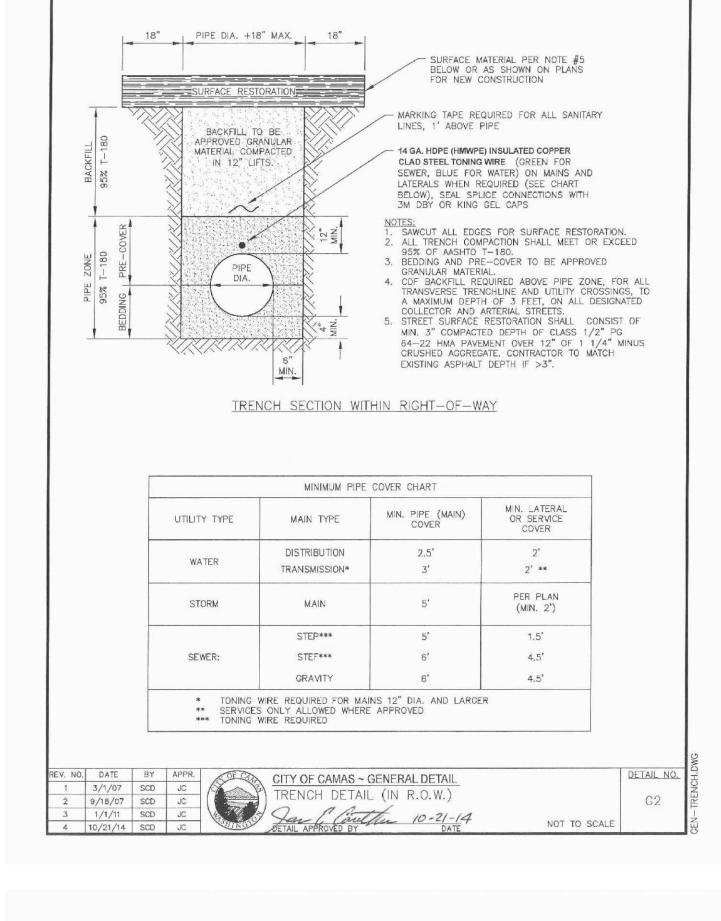


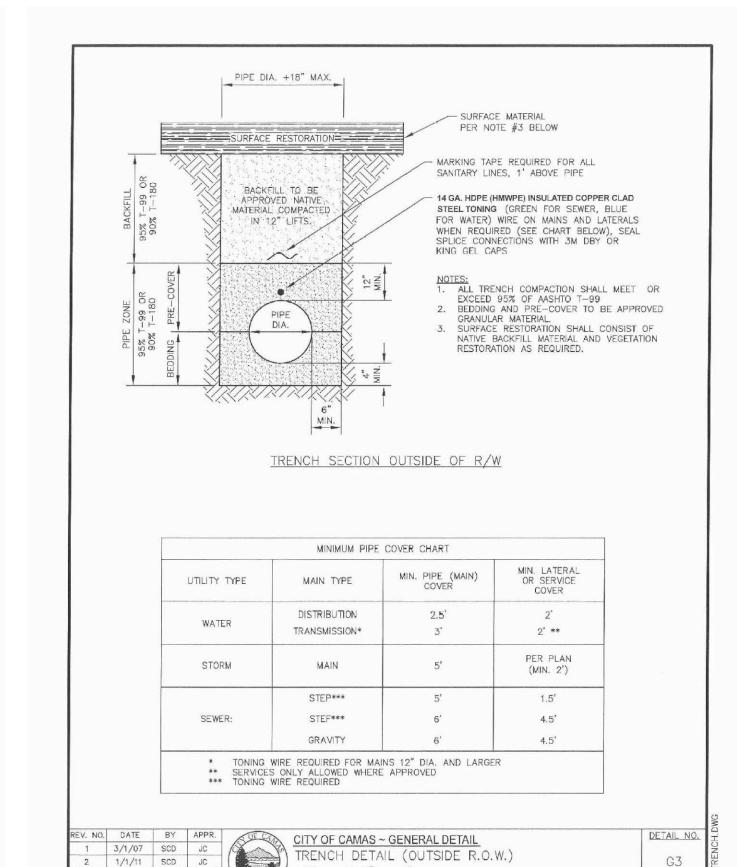




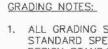


- 1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T./APWA "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" AND STANDARD DETAIL SHEETS ATTACHED HEREWITH.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES, INCLUDING THE INVERT AND TOP ELEVATIONS AT CROSSING LOCATIONS, PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE CITY ENGINEER OF ANY POTENTIAL CONFLICTS.
- 3. CONTRACTOR SHALL CALL CLARK COUNTY'S 24-HOUR UTILITY NOTIFICATION CENTER AT (360) 696-4848 OR (800) 553-4344 FOR UTILITIES LOCATE, A MINIMUM OF 48 HOURS PRIOR TO
- 4. ALL EXISTING MONUMENTS, PROPERTY CORNERS AND SURVEY MARKERS SHALL BE PROTECTED. REPLACEMENT OF LOST, DESTROYED OR DAMAGED MARKERS SHALL BE DONE BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH R.C.W. 58.09 AT THE CONTRACTORS EXPENSE.
- THE CONTRACTOR SHALL NOT EXCAVATE OVER FOUR FEET IN DEPTH WITHOUT USING ADEQUATE SAFETY MEASURES. THE CONTRACTOR IS REFERRED TO TITLE 296 W.A.C., PART N FOR EXCAVATION, TRENCHING AND SHORING REQUIREMENTS. 6. ALL UTILITIES SHALL HAVE A GRANULAR BACKFILL APPROVED BY THE CITY OF CAMAS. WATER SETTLEMENT OF UTILITY TRENCHES IS NOT ALLOWED. TRENCH LINES LOCATED WITHIN
- AN EXISTING ROADWAY SHALL BE PLATED OR TOPPED WITH COLD MIX. GRANULAR BACKFILL OVERNIGHT IS NOT ALLOWED. PLATES SHALL HAVE COLD MIX AROUND ALL EDGES.
- 7. ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE EROSION/SEDIMENT CONTROL PLAN AND CITY OF CAMAS EROSION/SEDIMENT CONTROL DETAILS PRIOR TO ANY CLEARING OR THE START OF ANY CONSTRUCTION.
- 8. IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A "STOP WORK" ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF.
- 9. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF CAMAS PUBLIC WORKS DEPARTMENT. APPROVAL SHALL BE OBTAINED PRIOR TO THE START OF
- 10. THE DEVELOPER/CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING WITH THE CITY OF CAMAS ENGINEERING DEPARTMENT PRIOR TO COMMENCING ANY WORK.
- 11. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS WILL REQUIRE A SUBMITTAL FROM THE APPLICANT'S ENGINEER AND APPROVAL FROM THE CITY OF CAMAS ENGINEERING DEPARTMENT. 12. AN EROSION/SEDIMENT CONTROL BOND MAY BE REQUIRED BY THE CITY OF CAMAS PRIOR TO





NOT TO SCALE



- 1. ALL GRADING SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE CITY OF CAMAS
- 2. THE LIMITS OF CLEARING SHALL BE FLAGGED PRIOR TO CLEARING AND GRUBBING OF THE SITE.
- 3. ANY EXISTING TREES TO REMAIN WITHIN THE CLEARING LIMITS SHALL BE MARKED AND PROTECTED FROM
- 4. PRIOR TO ANY FILL PLACEMENT, ALL AREAS WHICH WILL RECEIVE STRUCTURAL FILL SHALL BE EXCAVATED TO FIRM, NON-ORGANIC, UNDISTURBED NATIVE GROUND. THE STRIPPED AREAS SHALL BE OBSERVED AND ACCEPTED BY THE GEOTECHNICAL ENGINEER AND THE CITY OF CAMAS INSPECTOR.
- 5. ALL LOT FILLS SHALL MEET 95% OF AASHTO T-99 COMPACTION.
- 6. ALL RIGHT-OF-WAY FILLS SHALL MEET 95% OF AASHTO T-180 COMPACTION.
- 7. FILLS SHALL BE INSTALLED IN VERTICAL LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND SHALL BE COMPACTED AS PREVIOUSLY NOTED.
- 8. FILLS PLACED ON SLOPES EXCEEDING 5H:IV SHALL BE KEYED AND BENCHED, GEOTECHNICAL APPROVAL REQUIRED PRIOR TO ANY FILL PLACEMENT.
- 9. ALL SURFACES SHALL BE GRADED SMOOTH AND BE FREE OF IRREGULARITIES THAT MIGHT ACCUMULATE
- 10. ALL CUT AND FILL SLOPES SHALL NOT EXCEED 2:1 SLOPES.
- 11. ANY EXCESS MATERIAL NOT REQUIRED TO MEET THE GRADES SHOWN ON THE PLANS SHALL BE HAULED FROM THE SITE TO A CONTRACTOR PROVIDED WASTE SITE. IF WASTE SITE IS WITHIN CITY LIMITS, A GRADING PERMIT MAY BE REQUIRED.
- 12. ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF EROSION CONTROL BMP'S.
- 13. ALL SURFACES REQUIRING VEGETATION SHALL BE ROUGHENED PRIOR TO SEEDING (I.E. WHEEL TRACKED PERPENDICULAR TO SURFACE FLOW TO REDUCE EROSION AND HELP VEGETATION).
- 14. FINAL GEOTECHNICAL SUMMARY REPORT, INCLUDING ALL COMPACTION TESTING RESULTS, SHALL BE SUBMITTED UPON COMPLETION OF SITE GRADING WORK,

REV. NO.	DATE	BY	APPR,	Or Car	CITY OF CAMAS ~ EROSION CONTROL DETAIL		DETAIL N
1	9/18/07	SCD	JC	13	GRADING NOTES		
2	1/1/11	SCD	JC		GRADING NOTES		EC1
			de de la companya de	A 71/2 2	1-A-11		
				MINGIO	DETAIL APPROVED BY DATE	NOT TO SCALE	

EROSION/SEDIEMENT CONTROL NOTES:

I/SEDIMENT CONTROL (ESC) PLAN AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS TO BE UTILIZED AS A GUIDE TO CONTROL THE TRANSPORT OF LOOSE SOILS TO THE PROPERTY UTSIDE OF THE CONSTRUCTION AREA AND AROUND THE CONSTRUCTION SITE. THE ESC MEASURES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.

CITY OF CAMAS ~ GENERAL DETAIL

G1

- . THE IMPLEMENTATION OF THE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THE ESC MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND PERMANENT VEGETATION/LANDSCAPING IS
- 3. IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A "STOP WORK" ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF.
- 4. THE CONTRACTORS SHALL BE RESPONSIBLE TO FAMILIARIZE THEMSELVES WITH THE MOST RECENTLY ADOPTED EDITION OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL. II AND THE CITY OF CAMAS MUNICIPAL CODE 14.06 (2011).
- 5. ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO DISTURBING AND EXPOSING ANY SOIL SURFACES (I.E. CONSTRUCTION ENTRANCES, FILTER FABRIC SEDIMENT BARRIERS, AND SEDIMENTATION TRAPS) AND MAINTAINED FOR THE DURATION OF THE PROJECT. TRAPPED SEDIMENT IN EXCESS OF 1 FOOT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED SOIL AREAS RESULTING FROM VEGETATION REMOVAL SHALL BE PERMANENTLY STABILIZED. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR
- 6. TO MINIMIZE EROSION AND SEDIMENTATION TRANSPORTATION, EARTHWORK SHALL NOT BE PERFORMED WHILE SOILS ARE IN AN UNSTABLE STATE DUE TO PRECIPITATION.
- . THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE CLEARING LIMITS AND/OR ANY EASEMENTS, SENSITIVE OR CRITICAL AREAS, AND THEIR BUFFERS, TREES, AND DRAINAGE COURSES FLAGGED PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. FLAGGING LIMITS ARE TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- 8. REMOVE ONLY THOSE TREES AND SHRUBS THAT NEED TO BE REMOVED FOR THE CONSTRUCTION OF ROADS, SIDEWALKS, UTILITIES, AND STORMWATER FACILITIES.
- 9. ALL EXISTING AND NEWLY CONSTRUCTED ROAD CATCH BASINS AND CURB INLETS AFFECTED BY ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- 10. ALL POLLUTANTS THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER SYSTEM.
- 11. ALL DISTURBED SOIL SURFACES ARE TO BE STABILIZED BY A SUITABLE APPLICATION OF "BEST MANAGEMENT PRACTICES" (BMP'S). DURING THE PERIOD OF OCTOBER 1 THROUGH JULY 5 DISTURBED SOILS MAY REMAIN UNSTABILIZED FOR UP TO TWO DAYS WHEN NOT BEING WORKED. FROM JULY 5 THROUGH OCTOBER 1, DISTURBED SOILS MAY REMAIN UNSTABILIZED FOR UP TO 7 DAYS WHEN NOT BEING WORKED. STABILIZATION OF DISTURBED SOIL AREAS MAY CONSIST OF HYDROSEEDING, HAND-SEEDING AND MULCHING, PLACEMENT OF EROSION CONTROL BLANKETS OR PLASTIC. ALL SEEDED AREAS ARE TO BE FERTILIZED, WATERED, AND MAINTAINED TO ENSURE THAT THE GROWTH OF VEGETATION OCCURS AS SOON AS POSSIBLE.
- 12. ALL TEMPORARY SEDIMENT AND EROSION CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED.

REV. NO.	DATE	BY	APPR.	QF COD	CITY OF CAMAS ~ EROSION CONTROL DETAIL		DETAIL NO.
1	9/18/07	SD	JC	(A)	EROSION/SEDIMENT CONTROL NOTES		
2	1/1/11	SCD	JC		ERUSION/ SEDIMENT CONTROL NOTES		EC2
				MINGTO	DETAIL APPROVED BY DATE	NOT TO SCALE	

LOG SHALL BE KEPT AND MADE AVAILABLE TO THE CITY OF CAMAS. THE POLICING AND MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO: - VERIFYING THAT ALL AREAS ARE GRADED SUCH THAT ALL RUNOFF IS DIRECTED TO A SEDIMENTATION DEVICE BEFORE DISCHARGE TO SURFACE. REMOVAL OF TRAPPED SILT AT SILT BARRIERS, SILT TRAPS, OR POINTS OF ACCUMULATION. ADDITIONAL PROTECTIVE MEASURES DUE TO JOB SITE OR WEATHER CONDITIONS AS REQUIRED BY THE MONITORING OF VEHICLES LEAVING THE SITE TO MINIMIZE TRANSMISSION OF LOOSE SOILS TO THE PUBLIC ROADWAYS. VERIFY THAT ALL PROPERTIES ADJACENT TO THE PROJECT SITE ARE PROTECTED FROM SEDIMENTATION DEPOSITION. THIS MAY BE ACCOMPLISHED BY INSTALLING PERIMETER CONTROLS SUCH AS SEDIMENTATION BARRIERS, FILTERS OR DIKES, SEDIMENTATION BASINS/TRAPS, OR BY A COMBINATION OF SUCH MEASURES. 14. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES SHALL BE STABILIZED IN ACCORDANCE WITH EROSION/SEDIMENT CONTROL NOTE 11. SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN TWO YEARS OF CONSTRUCTION MUST BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES. THESE MEASURES MAY CONSIST OF ROUGHENED SOIL SURFACES, INTERCEPTORS, DIVERSIONS OR TERRACES, TEMPORARY OR PERMANENT CHANNELS, ADDITIONAL VEGETATION, OR PIPE SLOPE DRAINS AS REQUIRED BY THE CITY OF CAMAS UNTIL THE 15. THE ESC MEASURES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING ANY STORM EVENT. 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING UNDERGROUND UTILITIES AS SPECIFIED - WHERE FEASIBLE, NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. - TRENCH DE-WATER DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP OR SEDIMENT POND. 17. PRIOR TO CONSTRUCTION, THE CITY OF CAMAS REQUIRES AN APPROVED FORM OF SECURITY IN THE AMOUNT OF 200% OF THE ENGINEER'S ESTIMATED COST OF THE ESC MEASURES, INCLUDING ASSOCIATED LABOR, AS SHOWN IN THE APPROVED ESC PLAN AND SWPPP. 18. SUGGESTED STANDARD SEED MIXTURE FOR THOSE AREAS WHERE A TEMPORARY VEGETATIVE COVER IS **TEMPORARY EROSION CONTROL MIX*** SEED VARIETY CHEWINGS OR ANNUAL BLUE GRASS (FESTUCA RUBRA VAR. COMMUTATA OR POA ANNA) PERENNIAL RYE (LOLIUM PERENNE REDTOP OR COLONIAL BENTGRASS (AGROSTIS ALBA OR AGROSTIS TENUIS) WHITE DUTCH CLOVER (TRIFOLIUM REPENS) *APPLICATION RATE OF 120 LBS/ACRE AND COVERED WITH STRAW OR MULCH 19. SUGGESTED TURF SEED MIXTURE FOR DRY SITUATIONS WHERE THERE IS NO NEED FOR MUCH WATER: LOW-GROWING TURF SEED MIX* SEED VARIETY DWARF TALL FESCUE (SEVERAL VARIETIES) (FESTUCA ARUNDINACEA VAR.) DWARF PERENNIAL RYE (LOLIUM PERENNE VAR. BARCLAY) RED FESCUE (FESTUCA RUBRA) COLONIAL BENTGRASS

*APPLICATION RATE OF 120 LBS/ACRE AND COVERED WITH STRAW OR MULCH

CITY OF CAMAS ~ EROSION CONTROL DETAIL

ROSION/SEDIMENT CONTROL NOTES

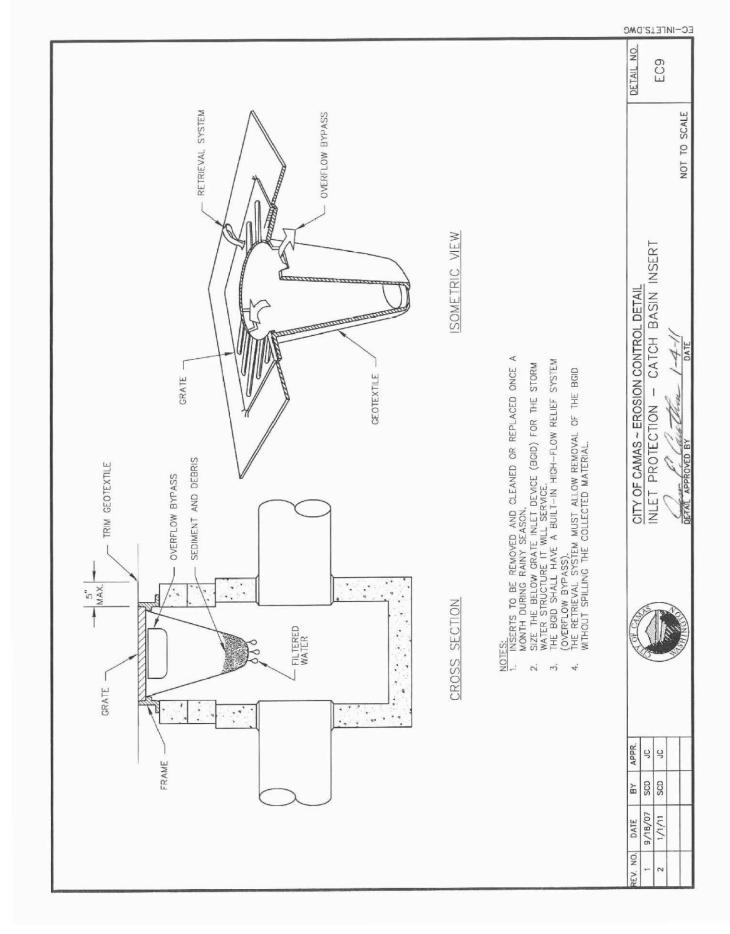
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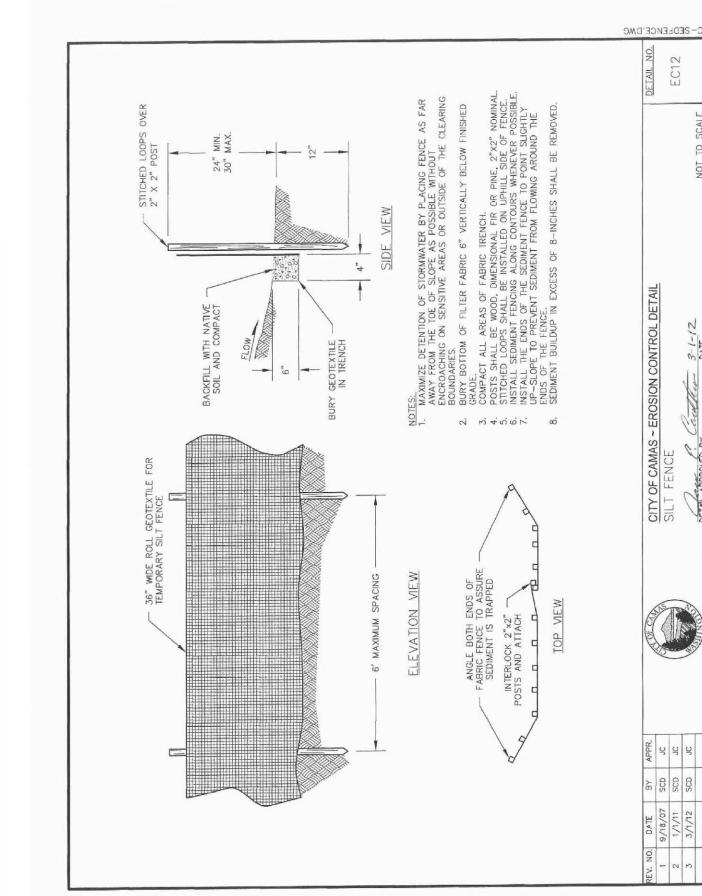
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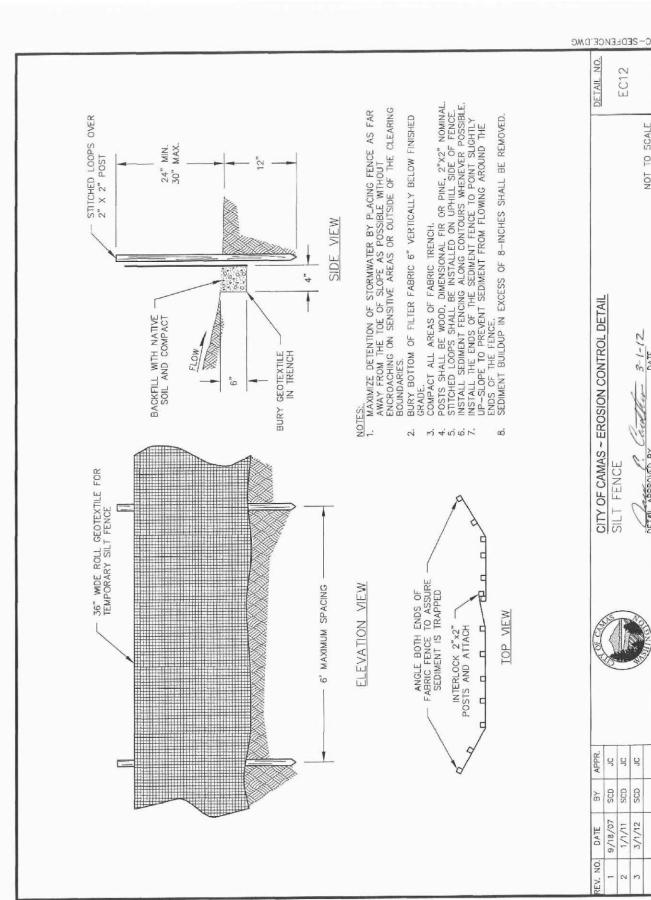
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POLICING THE JOB SITE DAILY AND MAINTAINING THE

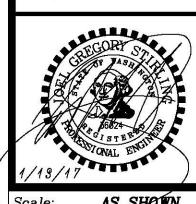
EROSION/SEDIMENT CONTROL NOTES (CONTINUED):

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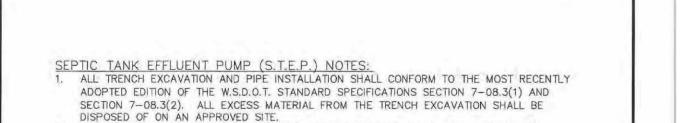






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- GRANULAR MATERIAL OF EITHER WASHED SCREENINGS OR 5/8 INCH MINUS CRUSHED ROCK. SAND BACKFILL IS NOT ALLOWED.

 3. TRENCH COMPACTION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08,3(3). CONTRACTOR TO DETERMINE THE TYPE OF EQUIPMENT AND METHOD TO USE TO ACHIEVE THE REQUIRED COMPACTION. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE A.A.S.H.T.O. T-180 TEST METHOD.
- 4. SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.

2. PIPE BEDDING, PIPE ZONE MATERIAL, AND TRENCH BACKFILL SHALL BE AN APPROVED

- 5. ALL SANITARY SEWER PIPE AND FITTINGS 2 INCHES IN DIAMETER AND LARGER SHALL BE PVC GASKETED PIPE, ASTM D2241 PRESSURE RATED FOR 200 PSI UNLESS OTHERWISE NOTED. ALL SANITARY SEWER PIPE AND FITTINGS SMALLER THAN 2 INCH DIAMETER SHALL BE PVC SCHEDULE 40.
- 6. PIPE SHALL BE BEDDED WITH A MINIMUM OF 4 INCHES OF APPROVED GRANULAR MATERIAL.
 7. 14 GAUGE GREEN HDPE (HMWPE) INSULATED COPPER CLAD STEEL TONING WIRE SHALL BE PLACED DIRECTLY OVER ALL SEWER MAINS AND SERVICE LATERALS. THE TONING WIRE SHALL BE ACCESSIBLE AT ALL VALVES, RISERS, A.A.R.V.'S AND SERVICE BOXES. ALL SPLICES AND CONNECTIONS TO TONING WIRE SHALL BE PROTECTED WITH KING GEL CAPS, 3M DBY DIRECT BURY, OR OTHER APPROVED EQUAL CONNECTORS.
- 8. ALL PIPE AND FITTINGS SHALL BE HYDROSTATICALLY TESTED AT 150 P.S.I. FOR FIFTEEN MINUTES, EXCEPT LATERAL SERVICES, WHICH SHALL BE TESTED AT 100 P.S.I. FOR 30 SECONDS.
- 9. ALL S.T.E.P. SANITARY SEWER MAINLINES SHALL BE INSTALLED WITH A MINIMUM COVER OF 5 FEET.
- 10. ALL S.T.E.P. SANITARY SEWER LATERALS SHALL BE INSTALLED IN A DEDICATED TRENCH FROM THE SERVICE CONNECTION TO THE TANK. BACKFILL SHALL BE APPROVED GRANULAR
- MATERIAL OR AS APPROVED BY THE WATER/SEWER DEPARTMENT.

 11. ALL TANKS WITH A BURY DEPTH OVER 4'-0" MUST HAVE H-20 RATED TANK LID.



SEPTIC TANK EFFLUENT FILTER (S.T.E.F.) NOTES:

1. ALL TRENCH EXCAVATION AND PIPE INSTALLATION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(1) AND SECTION 7-08.3(2). ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE DISPOSED OF ON AN APPROVED SITE.

- PIPE BEDDING, PIPE ZONE MATERIAL AND TRENCH BACKFILL SHALL BE AN APPROVED GRANULAR MATERIAL OF EITHER WASHED SCREENINGS OR 5/8 INCH MINUS CRUSHED ROCK.
- SAND BACKFILL IS NOT ALLOWED.

 3. TRENCH COMPACTION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7—08.3(3). CONTRACTOR TO DETERMINE THE TYPE OF EQUIPMENT AND METHOD TO USE TO ACHIEVE THE REQUIRED COMPACTION. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE A.A.S.H.T.O. T—180 TEST METHOD.
- 4. SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY
- REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.

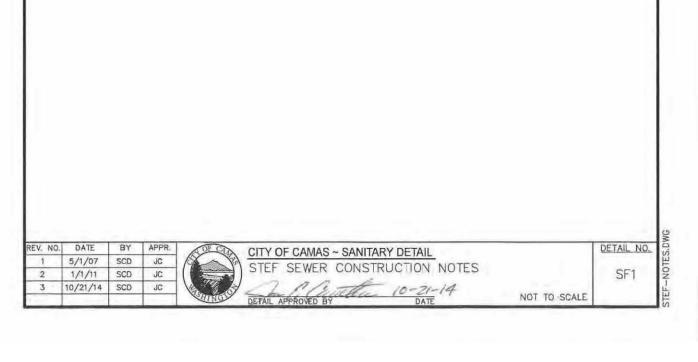
 5. ALL PIPE AND FITTINGS SHALL BE PVC GASKETED PIPE, ASTM D2241 PRESSURE RATED FOR
- 200 PSI UNLESS OTHERWISE NOTED.
 PIPE SHALL BE BEDDED WITH A MINIMUM OF 4 INCHES OF APPROVED GRANULAR MATERIAL.
 14 GAUGE GREEN HDPE (HMWPE) INSULATED COPPER CLAD STEEL TONING WIRE SHALL BE PLACED DIRECTLY OVER ALL SEWER MAINS AND SERVICE LATERALS. THE TONING WIRE SHALL BE ACCESSIBLE AT ALL SERVICE LATERAL MARKER BOARDS, A.A.R.V.'S, RISERS, AND CLEANOUTS. ALL SPLICES AND CONNECTIONS TO TONING WIRE SHALL BE PROTECTED WITH KING GEL CAPS, 3M DBY DIRECT BURY, OR OTHER APPROVED EQUAL CONNECTORS. ALL
- TONING WIRE CONNECTIONS SHALL BE TONE TESTED PRIOR TO INSTALLING BASE ROCK.

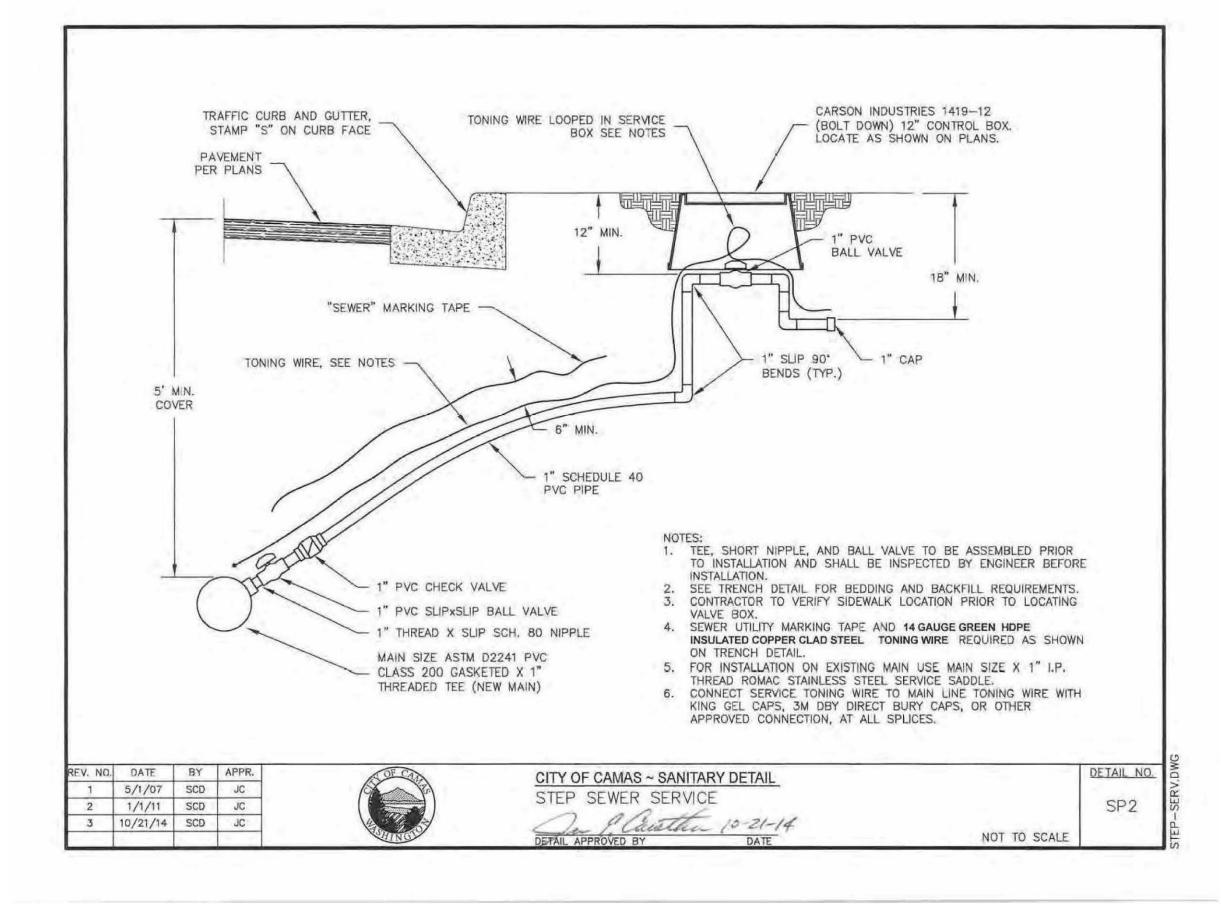
 8. MAINLINE CLEANOUTS SHALL BE SPACED A MAXIMUM OF 400 FEET AND/OR FOR EVERY 90 DEGREES OF BENDS.
- 9. ALL PIPE AND FITTINGS SHALL BE AIR TESTED AT FIVE P.S.I. FOR ONE MINUTE PER EVERY 100 FEET OF MAINLINE.
- 100 FEET OF MAINLINE.

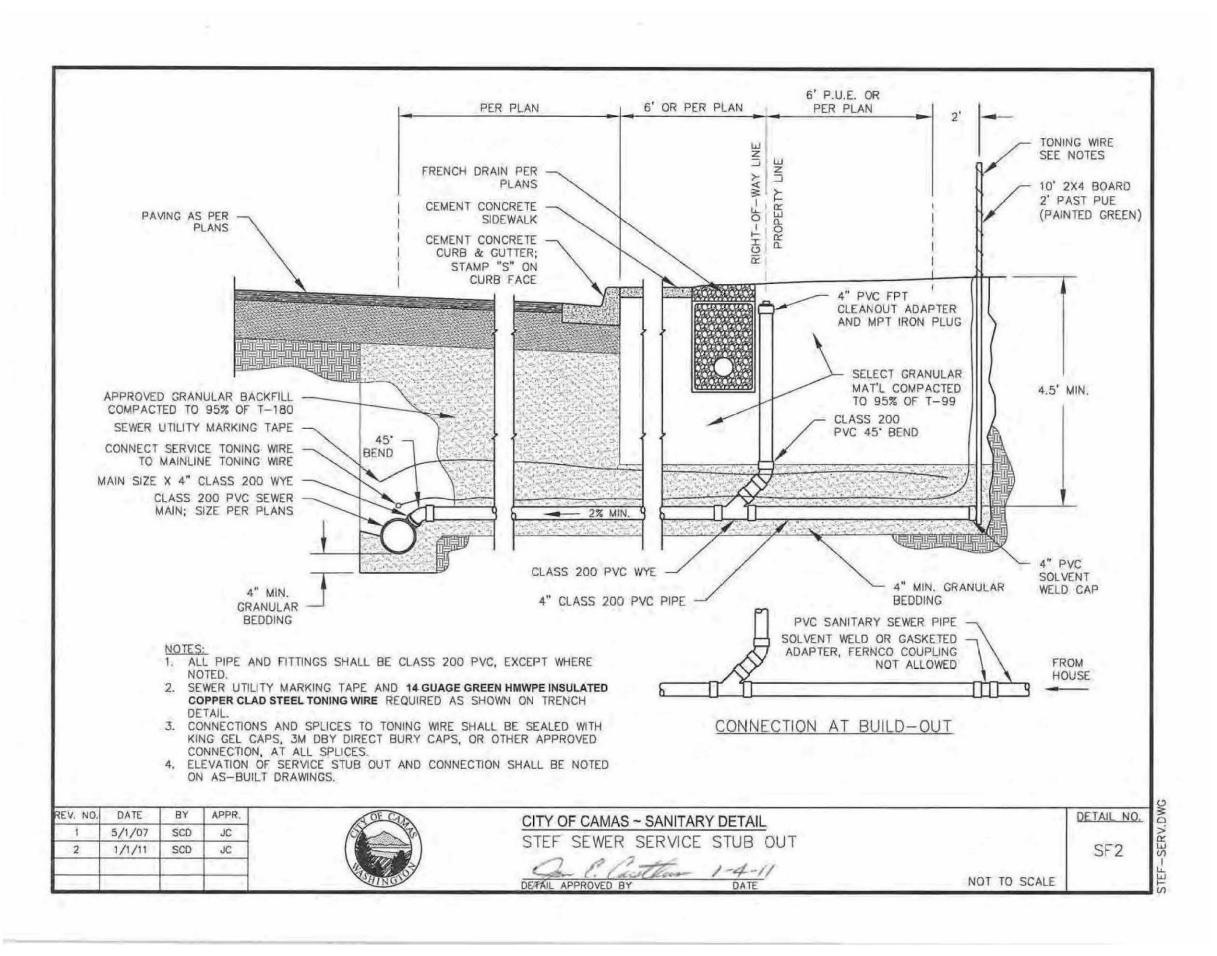
 10. SANITARY SERVICE LATERAL ENDS SHALL EXTEND 8 FEET PAST THE STREET RIGHT-OF-WAY
- LINE OR AS SHOWN ON THE PLANS AND MARKED WITH A 10 FOOT LONG 2 X 4.

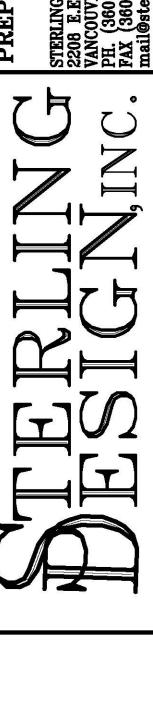
 11. ALL SANITARY LINES SHALL BE INSTALLED WITH A MINIMUM COVER OF 6 FEET AND A
- MINIMUM GRADE OF 0.4% UNLESS OTHERWISE SHOWN ON THE PLANS.

 12. ALL S.T.E.F. SANITARY SEWER LATERALS SHALL BE INSTALLED IN A DEDICATED TRENCH FROM
- THE SERVICE CONNECTION TO THE TANK. BACKFILL SHALL BE APPROVED GRANULAR
 MATERIAL OR AS APPROVED BY THE WATER/SEWER DEPARTMENT.
- 13. ALL TANKS WITH A BURY DEPTH OVER 4'-0" MUST HAVE H-20 RATED TANK LID









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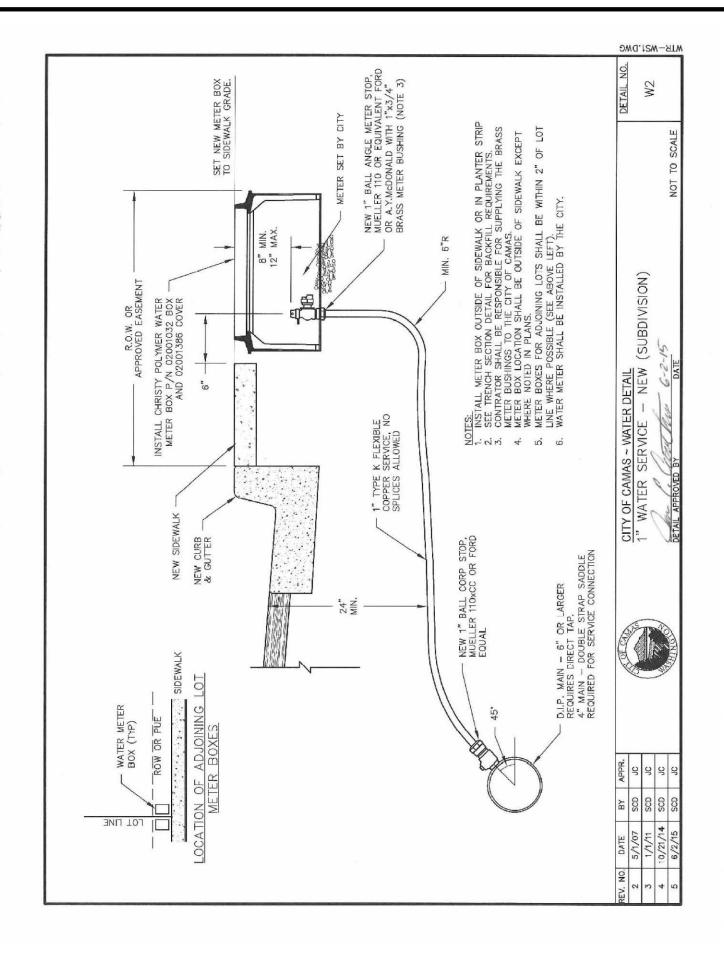
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WATER CONSTRUCTION NOTES:

- ALL TRENCH EXCAVATION AND PIPE INSTALLATION SHALL CONFORM TO THE MOST CURRENT A.W.W.A. STANDARDS, AND THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(1) AND SECTION 7-08.3(2). ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE LOADED DIRECTLY INTO A DUMP TRUCK AND DISPOSED OF AT AN APPROVED SITE.
- 2. PIPE BEDDING, PIPE ZONE MATERIAL AND TRENCH BACKFILL SHALL BE AN APPROVED GRANULAR MATERIAL OF EITHER WASHED SCREENINGS OR 5/8 INCH MINUS CRUSHED ROCK. SAND BACKFILL IS NOT ALLOWED.
- 3. TRENCH COMPACTION SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE W.S.D.O.T. STANDARD SPECIFICATIONS SECTION 7-08.3(3). CONTRACTOR TO DETERMINE THE TYPE OF EQUIPMENT AND METHOD USED TO ACHEIVE THE REQUIRED COMPACTION AND BE APPROVED BY THE CITY OF CAMAS. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE A.A.S.H.T.O. T-180 TEST METHOD.
- 4. SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE
- 5. ALL VALVES 10 INCHES OR LESS IN DIAMETER SHALL BE A.W.W.A. APPROVED RESILIENT WEDGE GATE VALVES, BUBBLE TIGHT AT 200PSI, HAVE NON RISING STEMS, AND OPEN BY TURNING TO THE LEFT. PROVIDE A 2 INCH SQUARE NUT TO CONFORM TO A.W.W.A. C-504. ALL VALVES 12 INCHES OR LARGER IN DIAMETER SHALL BE A.W.W.A. APPROVED BUTTERFLY VALVES.
- 6. ALL WATER PIPE 12 INCHES OR LESS IN DIAMETER SHALL BE DUCTILE IRON CLASS 52 PIPE. ALL WATER PIPE 14 INCHES IN DIAMETER AND LARGER SHALL BE DUCTILE IRON CLASS 51 PIPE. RUBBER GASKET TYPE SHALL BE U.S. PIPE, TYTON OR APPROVED EQUAL. ALL FITTINGS SHALL BE DUCTILE IRON AND SHALL CONFORM TO THE A.W.W.A. STANDARD C-110.
- 7. ALL TEES, FLANGES, CAPS, BENDS AND OFFSETS, AS WELL AS ALL OTHER APPURTENANCES WHICH ARE SUBJECT TO UNBALANCED THRUST, SHALL BE PROPERLY BRACED BY ONE OF THE FOLLOWING METHODS:

 A. CONCRETE THRUST BLOCKING— AS DETAILED IN THE PLANS, SHALL BE PLACED AT BENDS, TEES, DEAD ENDS AND CROSSES. BLOCKING SHALL BE 3000 PSI CONCRETE POURED IN PLACE. CONCRETE BLOCKING SHALL BE AGAINST SOLID UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH EXCAVATION AND SHALL BE SHAPED SO AS NOT TO OBSTRUCT ACCESS TO THE JOINTS OF THE PIPE. 6 MIL. PLASTIC SHALL BE USED TO INSULATE PIPE.
- B. MECHANICAL JOINT RESTRAINT-USE "EBBA IRON SERIES 1100 MEGA LUG MECHANICAL JOINT THRUST RESTRAINT" OR APPROVED EQUAL. CONTRACTOR TO RESTRAIN THE MINIMUM REQUIRED PIPE LENGTH WITH "FIELD-LOK" GASKETS OR APPROVED EQUAL.
- 8. ALL WATER MAINS SHALL BE TESTED AT 200PSI IN ACCORDANCE WITH SECTION 7-09.3(23) OF THE STANDARD SPECIFICATIONS. THE CITY SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ACCEPTANCE TESTING. MAXIMUM LENGTH OF PIPE TO BE TESTED AT ONE TIME IS 1000 FT.
- 9. CHLORINATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 7-09.3(24) OF THE STANDARD SPECIFICATIONS. CITY INSPECTOR WILL TAKE SAMPLES AND DELIVER TO LABORATORY FOR BACTERIA TESTING, NEGATIVE SAMPLE RESULTS SHALL BE CONFIRMED, PRIOR TO PRESSURE TESTING. DECLORINATION OR DISPOSAL TO SANITARY MAIN MAY BE REQUIRED.
- 10. APPROPRIATE DISPOSAL AND OR DECHLORINATION OF FLUSHED WATER DURING BLOWOFF IS THE RESPONSIBILITY OF THE CONTRACTOR. METHOD USED SHALL BE APPROVED BY CITY AND OTHER REGULATING AUTHORITIES.
- 11. WATER MAIN TO HAVE A MINIMUM COVER OF 30 INCHES, WATER SERVICES TO HAVE A MINIMUM 24" OF COVER.
- 12. ALL EXISTING VALVES TO BE OPERATED BY CITY OF CAMAS WATER/SEWER DEPARTMENT PERSONNEL ONLY.
- 13. NO CONNECTIONS TO EXISTING WATER MAINS SHALL BE MADE PRIOR TO SATISFACTORY PRESSURE TESTING, DISINFECTION, AND THE CONFIRMATION OF A NEGATIVE BACTERIA TEST.

REV. NO.	DATE	BY	APPR.	CITY OF CAMAS ~ WATER DETAIL	DETAIL NO
1	7/17/06	SCD	RES1071	WATER CONSTRUCTION NOTES	
2	5/1/07	SCD	JC	WATER CONSTRUCTION NOTES	W1
3	1/1/11	SCD	JC	13 3 0 P Control 1-4-11	
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