

IMPROVEMENT PLANS

for

"WINDHAM OAKS"

ASBUILT 1/20/95

REVISIONS			
9/1/94 NEW PER BSS			
DESIGNED: B.S.S.	CHECKED: B.S.S.	DATE: 9-1-94	JOB NO.: 94-130
DRAWN: R.R.T.			SCALE: 1" = 50'

CONSTRUCTION NOTES:

GENERAL

- PRIOR TO COMMENCING CONSTRUCTION THE CONTRACTOR SHALL PROVIDE THE CITY AND THE ENGINEER WITH A SCHEDULE SHOWING ANTICIPATED SEQUENCE OF MAJOR CONSTRUCTION PHASES AND ESTIMATED DURATION.
- THE TOPOGRAPHIC CONTOURS AND DESIGN ELEVATIONS ARE BASED ON TOPOGRAPHIC INFORMATION PREPARED BY OTAK. A COPY OF THIS INFORMATION IS AVAILABLE FROM THE OFFICE OF W.B. WELLS. THE CONTRACTOR WILL REPORT ANY DISCREPANCY IN TOPOGRAPHIC INFORMATION TO THE ENGINEER IMMEDIATELY UPON DISCOVERY.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF WEST LINN AND OTHER APPLICABLE CODES.
- THE CONTRACTOR AND/OR SUB-CONTRACTOR SHALL HAVE A MINIMUM OF ONE (1) SET OF APPROVED CONSTRUCTION PLANS ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND LICENSES BEFORE STARTING CONSTRUCTION.
- NO CONSTRUCTION IS TO COMMENCE UNTIL PLANS ARE APPROVED AND ISSUED BY THE CITY OF WEST LINN.
- EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IN CASE WHERE ACTUAL LOCATION VARIES FROM PLAN, CONTRACTOR TO NOTIFY ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE CONTRACTOR IS TO COORDINATE WITH ALL OF THE UTILITY COMPANIES THE MARKING OF ALL EXISTING UTILITIES BEFORE EXCAVATION. COMPLIANCE WITH ORS 757.541 TO 757.571 IS REQUIRED.
- EXCESS EXCAVATED MATERIALS AND TOPSOIL/ STRIPPINGS TO BE REMOVED FROM THE SITE SHALL BE DISPOSED OF AT AN APPROVED OFF SITE LOCATION.
- THE CONTRACTOR SHALL DO ALL WORK SHOWN ON THE DRAWINGS AND ANY INCIDENTAL WORK CONSIDERED NECESSARY TO COMPLETE THE PROJECT IN AN ACCEPTABLE MANNER.
- ALL MATERIAL USED IS TO BE PER THE APPROVED PLANS. ANY ALTERNATES ARE TO BE APPROVED BY THE ENGINEER AND THE CITY PRIOR TO ITS USE. ALLOW A MINIMUM OF TWO WEEKS FOR APPROVAL.
- ALL MATERIAL SUPPLIERS SHALL, UPON REQUEST, SUBMIT TO W.B. WELLS & ASSOC., INC., AND/OR THE CITY PROOF THAT THE MATERIALS HAVE BEEN TESTED AND FOUND IN COMPLIANCE WITH THE SPECIFICATIONS AND SHALL CERTIFY THAT ALL MATERIALS TO BE DELIVERED TO THE JOB SITE MEET OR EXCEED SAID SPECIFICATIONS PRIOR TO DELIVERY. ANY MATERIAL NOT CERTIFIED BY THE SUPPLIER SHALL BE REMOVED FROM THE JOB SITE AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL KEEP W.B. WELLS & ASSOC., INC. AND THE CITY ADVISED OF HIS PROGRESS SO THAT INSPECTIONS CAN BE PERFORMED IN AN EFFICIENT MANNER. TWENTY-FOUR (24) HOUR NOTICE MUST BE GIVEN FOR TESTS OR INSPECTIONS.
- THE CONTRACTOR IS TO KEEP AN ACCURATE RECORD OF AS-BUILTS. SAID AS-BUILTS TO BE SUBMITTED TO W.B. WELLS UPON REQUEST.
- ANY PLAN CHANGES ARE TO BE SUBMITTED TO THE ENGINEER AND APPROVED BY THE CITY PRIOR TO ANY WORK BEING DONE ON THE CHANGE REQUEST.
- PRIOR TO ALL CONSTRUCTION WORK INCLUDING SITE CLEARING, THE CONTRACTOR SHALL INSTALL ALL SILT FENCING SHOWN ON PLANS. THE SILT FENCE DELINEATES THE LIMITS OF DISTURBANCE. NO EQUIPMENT OR MATERIAL MOVEMENT OR STORAGE OCCUR OUTSIDE THESE LIMITS WITHOUT REEVALUATION OF THE LIMITS OF THE FENCING.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING ALL UTILITY SERVICES TO THE SITE: GAS, ELECTRIC, PHONE, CABLE, ETC. ALL UTILITIES ARE TO BE PLACED UNDERGROUND.
- STREET LIGHTING IS TO BE MADE COMPLETE AND OPERATIONAL, I.E., POLES INSTALLED AND WIRED.
- BEDDING, PIPE ZONE, AND BACKFILL REQUIREMENTS TO BE IN ACCORDANCE WITH CITY OF WEST LINN STANDARD SPECIFICATIONS AND DETAILS.
- ALL ELEVATIONS SHOWN ARE BASED ON OTAK'S TOPOGRAPHIC SURVEYS.
- NO UTILITY LINES, STORM SEWER, SANITARY SEWER, AND WATER LINES TO BE CLOSER THAN TWO (2) FEET FROM FACE OF CURB.

- THE CONTRACTOR IS RESPONSIBLE FOR MANAGING CONSTRUCTION ACTIVITIES TO INSURE ADJACENT PUBLIC STREETS ARE KEPT CLEAR OF MUD, DEBRIS, AN DUST TO THE SATISFACTION OF THE CITY OF WEST LINN. THE CONTRACTOR S LEAVE ALL AREAS OF THE PROJECT FREE OF DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
- TRAFFIC DURING CONSTRUCTION SHALL BE CONTROLLED IN ACCORDANCE WITH THE STATE OF OREGON, MUTCD AND CITY OF WEST LINN REQUIREMENTS, AS APPLICABLE.
- ALL ON-SITE PIPE AND CONDUIT TRENCHES WITHIN PROPOSED PAVEMENT AREA SHALL HAVE COMPACTED GRANULAR BACKFILL - CLASS B.
- LOCATION/TRACER OF PROPER COLOR WIRE MUST BE LAID WITH ALL PLASTIC CITY STANDARDS AND TIED TO THE INSIDE OF MANHOLES.
- A MINIMUM TWO (2) FOOT HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER LINES AND SANITARY AND STORM MANHOLES. ALL CONSTRUCTION MUST MEET DEQ AND STATE WATER RESOURCES BOARD REQUIREMENTS FOR SEPARATION.
- MANHOLES SHALL BE NO LESS THAN 3 FEET FROM FACE OF CURB.
- RIM ELEVATIONS OF MANHOLES AND CLEANOUTS ARE APPROXIMATE. FINAL ELEVATIONS IN STREETS SHALL MATCH FINISH GRADE. OUTSIDE OF STREETS RIM ELEVATIONS SHALL BE 12 INCHES ABOVE FINISH GRADE. MANHOLES OUTSIDE OF THE STREET PAVEMENT SHALL HAVE BOLT DOWN LIDS.
- ALL GRADING SHALL BE TO THE LINE AND GRADE AS SHOWN ON THE APPROVED PLANS.
- THE CONTRACTOR SHALL EXCAVATE TRENCHES FOR THE INSTALLATION OF PRIVATE UTILITIES (PGE, TELEPHONE, GAS AND TV CABLE), AND INSTALL PVC PIPES FOR STREET CROSSINGS OF THE UTILITIES AS PER PLANS SUPPLIED BY THE AGENCIES. BACKFILL OF THE TRENCHES SHALL BE GRANULAR, COMPACTED AS SPECIFIED FOR THE SUBGRADE AND BASE. BACKFILL SHALL BE CONSIDERED A PART OF THE TRENCH CONSTRUCTION. STREET CROSSINGS SHALL BE INSTALLED PRI TO PLACEMENT OF BASE ROCK.
- EMBANKMENT MATERIAL SHALL BE FREE FROM ORGANICS, FROZEN MATERIAL, CONCRETE, ASPHALTIC CONCRETE AND OTHER DEBRIS. EMBANKMENT SHALL CONSIST OF AN APPROVED ALL-WEATHER MATERIAL (i.e. ROCK, CLEAN NATIVE SOIL).
- EMBANKMENT SHALL BE CONSTRUCTED IN SUCCESSIVE HORIZONTAL LAYERS NOT EXCEEDING EIGHT (8) INCHES IN LOOSE THICKNESS. THE USE OF LOADED HAULING EQUIPMENT IN ALL BUT THE LAST TWO (2) FEET OF FILL WILL BE ACCEPTABLE FOR COMPACTION, PROVIDED THE REQUIRED DENSITY IS OBTAINED THROUGHOUT THE WIDTH AND DEPTH OF EACH LAYER. THE TOP TWO (2) FEET SHALL BE COMPACTED USING SUITABLE MECHANICAL COMPACTORS.
- ALL BUT THE TOP TWO (2) FEET OF FILL UNDER PRIVATE IMPROVEMENTS IS TO MEET 90% OF AASHTO T-99 FOR COMPACTION. THE TOP TWO (2) FEET SHALL MEET 95% OF AASHTO T-99. EMBANKMENT UNDER PUBLIC IMPROVEMENTS SHALL COMPLY WITH THE APWA STD. SPECS.
- THE MATERIAL IN EACH LAYER SHALL BE OF A MOISTURE CONTENT TO MEET THE ABOVE COMPACTION REQUIREMENT. WETTING OR DRYING OF THE MATERIAL AND MANIPULATION TO SECURE A UNIFORM MOISTURE CONTENT THROUGHOUT THE LAYER MAY BE REQUIRED. SHOULD THE MATERIALS BE TOO WET TO PERMIT PROPER COMPACTION BY ROLLING, ALL WORK ON ALL PORTIONS OF THE FILL THUS AFFECTED SHALL BE DELAYED UNTIL THE MATERIAL HAS DRIED TO AN ACCEPTABLE MOISTURE CONTENT.
- THE OWNER, CITY AND W.B. WELLS & ASSOC., INC. SHALL RESERVE THE RIGHT TO CALL FOR COMPACTION TESTS. IF THE TESTS DO NOT SHOW SUITABLE RESULTS THE CONTRACTOR SHALL CORRECT IT AT HIS OWN COST.
- ALL EARTHWORK AND GRADING SHALL COMPLY WITH A.P.W.A. STANDARD SPECIFICATIONS AND CHAPTER 70 OF THE UNIFORM BUILDING CODE.
- THE SUBGRADE, BASE AND PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE CITY OF WEST LINN SPECIFICATIONS SECTION 210.0102. A ASPHALT SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 92% RICE, OR AS APPROVED BY THE CITY ENGINEER.
- ALL EMBANKMENT (FILL) SHOWN ON THE GRADING PLAN SHALL BE STRUCTURAL FILL.
- STREET SUBGRADE AND AGGREGATE BASE (PRIOR TO PAVING) SHALL BE PROOF ROLLED, IN THE PRESENCE OF THE ENGINEER'S INSPECTOR USING A 10-YARD DUMP TRUCK LOADED WITH 3/4"-0 CRUSHED ROCK. THE FOLLOWING OPERATIONS WILL PROCEED ONLY AFTER APPROVAL OF THE PUBLIC WORKS INSPECTOR:
 - PLACEMENT OF BASE ROCK.
 - POURING OF CURB.
 - 1ST & 2ND LIFT OF ASPHALT (SEPERATE APPROVALS)

- ALL UNDERGROUND UTILITIES, INCLUDING WATER SERVICES AND UTILITY CROSSINGS SHALL BE CONSTRUCTED PRIOR TO SUBGRADE PROOF ROLLING OR CURB CONSTRUCTION.
- TWO (2) 3" DIAMETER CURB RAIN DRAIN OUTLETS ARE TO BE PROVIDED PER LOT, WITHIN 5 FEET OF THE PROPERTY LINE.
- CURBS SHALL BE STAMPED WITH AN "S" FOR SANITARY SEWERS AND A "W" FOR WATER, PLACED DIRECTLY OVER THE SPOT THAT THE LATERAL OR SERVICE LINE PASSES UNDER THE CURB.
- DURING SUMMER TIME CONSTRUCTION THE CONTRACTOR IS TO CONTROL DUST FROM HIS CONSTRUCTION ACTIVITIES.
- PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR AND ALL SUB-CONTRACTORS ARE TO HAVE CURRENT BUSINESS LICENSES AND A COPY OF THE GENERAL CONTRACTOR'S LIABILITY INSURANCE IS TO BE PROVIDED TO THE CITY. THE GENERAL CONTRACTOR MUST ALSO BE PRE-QUALIFIED WITH THE CITY.
- PRIOR TO CONSTRUCTION, EROSION CONTROL MEASURES AS NOTED ON THE PLANS MUST BE INSTALLED. THE CITY RESERVES UNTO ITSELF AND UNTO THE CONSULTING ENGINEER THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES WHICH SHALL BE IMMEDIATELY IMPLEMENTED WHEN REQUES PERMIT ISSUED WITH THE PROJECT.
- ALL TRAFFIC CONTROL IS TO BE IN ACCORDANCE WITH SIGNAGE RE-QUIREMENTS AND PROCEDURES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT ADDITIONS.
- PRIOR TO CONSTRUCTION, TREE PROTECTION MEASURES AS NOTED ON THE PLANS MUST BE INSTALLED. THE CITY RESERVES UNTO ITSELF, THE ARBORIST AND THE CONSULTING ENGINEER THE RIGHT TO REQUIRE ADDITIONAL MEASURE FOR TREE PROTECTION WHICH SHALL BE IMMEDIATELY IMPLEMENTED WHEN REQ

SHEET INDEX

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- STREET AND STORM SEWER PLAN AND PROFILE
- SANITARY SEWER AND WATER PLAN AND PROFILE
- GRADING AND EROSION CONTROL PLAN
- CONSTRUCTION DETAILS

OWNER:

VIC COOMBS
WINDSOR DEVELOPMENT
P. O. BOX 131
WEST LINN, OR. 97068
PHONE: (503) 557-1001



VICINITY MAP
MAP #4225 1S1E 32 LOT 206

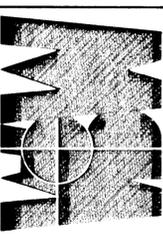
COVER SHEET

for
WINDHAM OAKS

CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

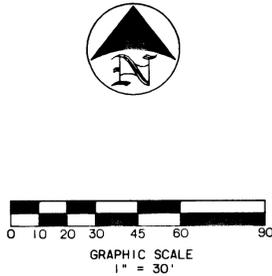
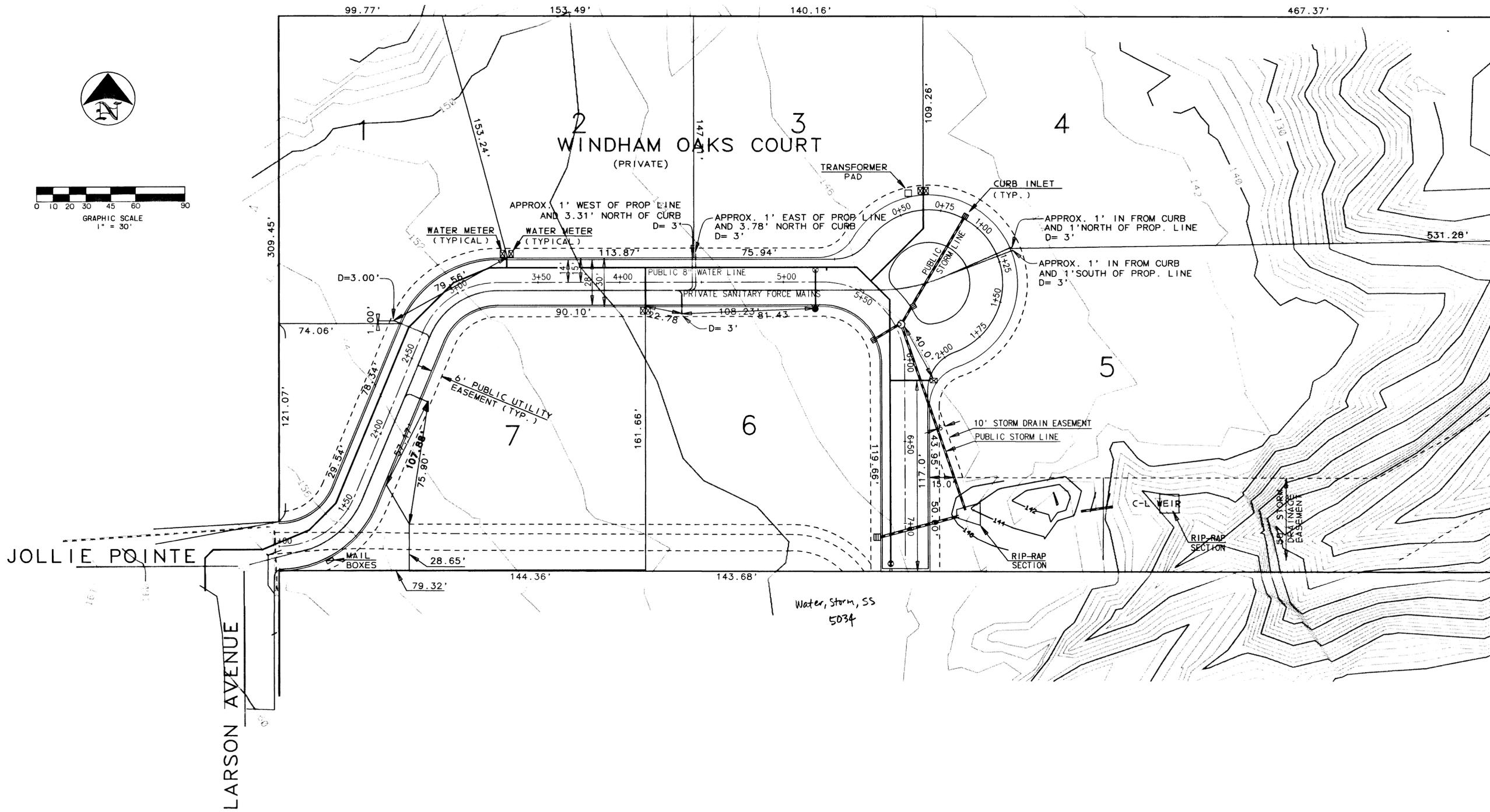


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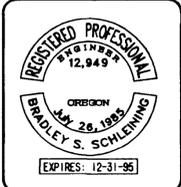
SHEET
1 of 6

MARY S. YOUNG STATE PARK

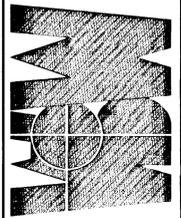


AS-BUILTS

COMPOSITE SITE AND UTILITY PLAN
for
WINDHAM OAKS
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

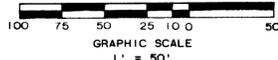


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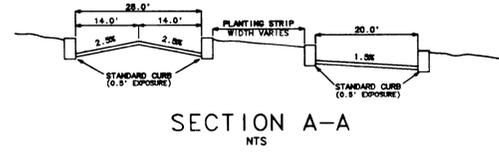
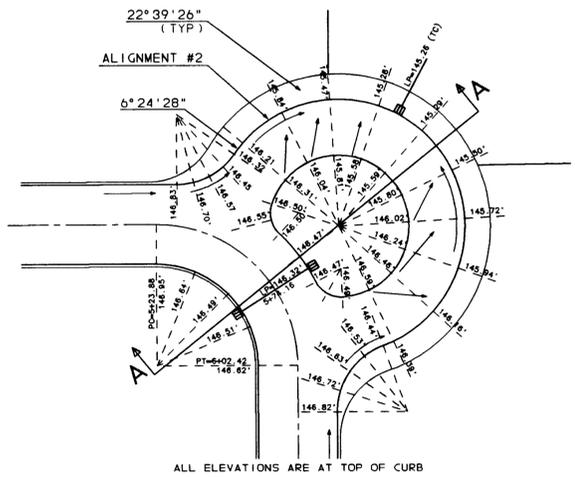
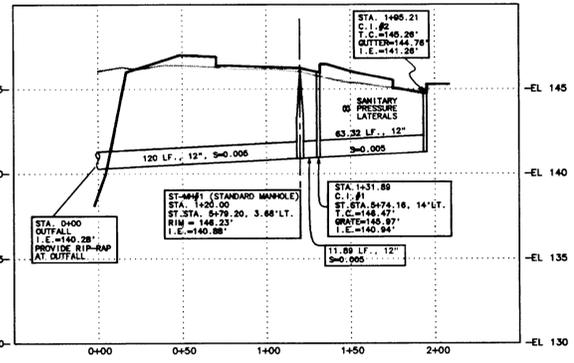
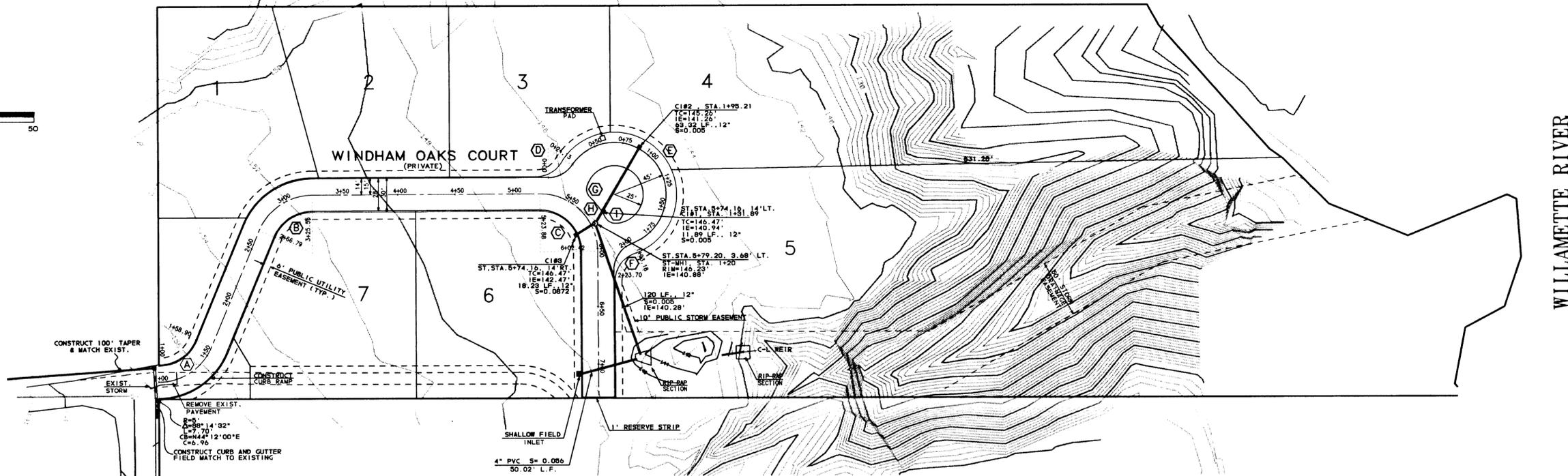


REVISIONS	
9/1/94	NET PER BSS
10/3/94	PER CITY
DESIGNED:	B.S.S.
CHECKED:	B.S.S.
DRAWN:	R.R.T.
DATE:	9-1-94
JOB NO.:	94-130
SCALE:	1" = 30'

MARY S. YOUNG STATE PARK

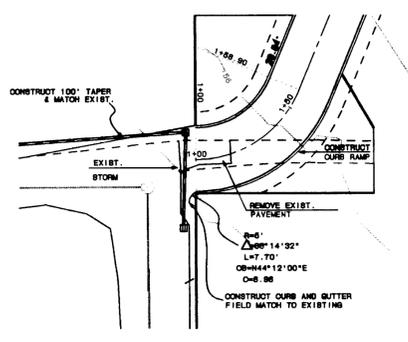
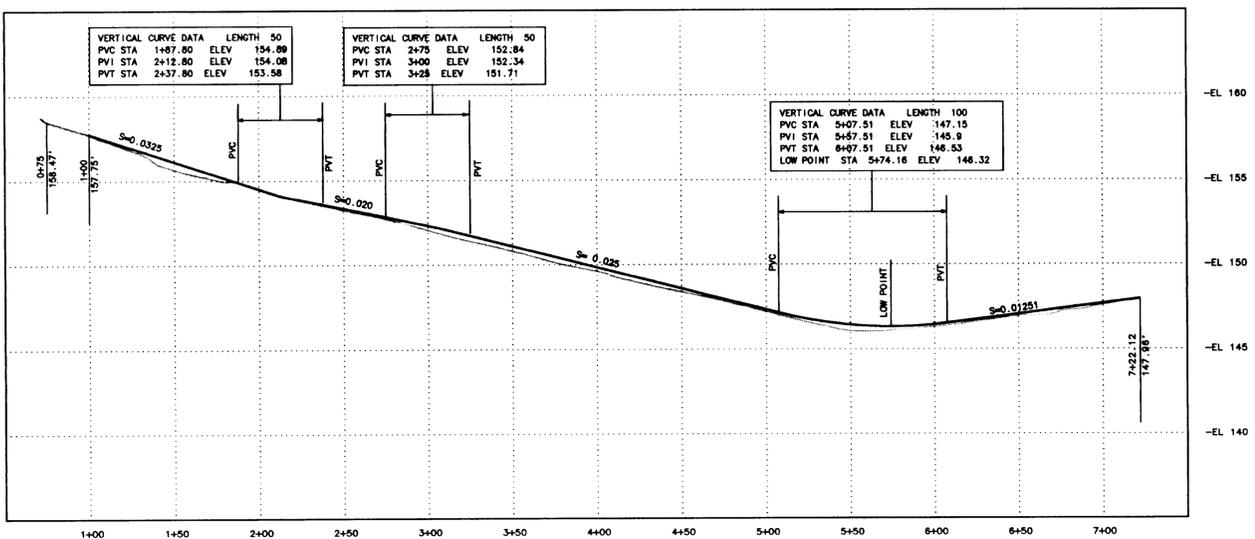


- A R=50.0' =87°30'00" L=58.91' CB=85°16'00"E C=65.68'
- B R=50.0' =87°20'00" L=58.76' CB=85°10'00"E C=65.44'
- C R=50.0' =90°00'00" L=78.64' CB=81°17'21"E C=70.71'
- D R=25.0' =50°17'43" L=24.13' CB=82°11'20"E C=23.20'
- E R=45.0' =21°14'23" L=169.05' CB=83°50'20"E C=85.78'
- F R=25.0' =89°08'41" L=30.52' CB=83°48'31"W C=28.86'
- G R=10.0' =64°59'16" L=111.94' CB=81°42'22"E C=10.74'
- H R=64.0' =19°12'22" L=21.45' CB=83°15'29"E C=21.35'
- I R=10.0' =84°59'16" L=11.34' CB=86°08'56" C=10.74'

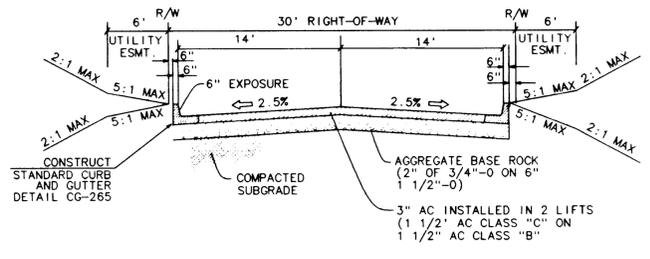


STORM SEWER

1. STORM SEWER PIPE SHALL BE ADS N-12 EXCEPT AS NOTED ON PLANS.
2. INSTALLATION OF ALL STORM SEWERS SHALL BE IN ACCORDANCE WITH WEST L STANDARD SPECIFICATIONS.
3. CATCH BASINS, INLETS, PIPE BEDDING AND TRENCH BACKFILL SHALL BE AS SHOWN ON THE DETAIL SHEETS.
4. PIPE BEDDING SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF THE CITY OF WEST LINN STANDARDS.
5. BACKFILL FOR TRENCHES SHALL CONFORM TO THE CITY OF WEST LINN STANDARDS.
6. THE WATER QUALITY MANHOLE SHALL HAVE A LOCKING LID.



LARSON/JOLLIE INTERSECTION DETAIL
1"=30'



WINDHAM OAKS COURT SECTION
NTS

REVISIONS

9/1/94	NEW PER BSS		
10/9/94	PER CITY		

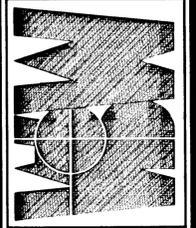
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AS-BUILTS

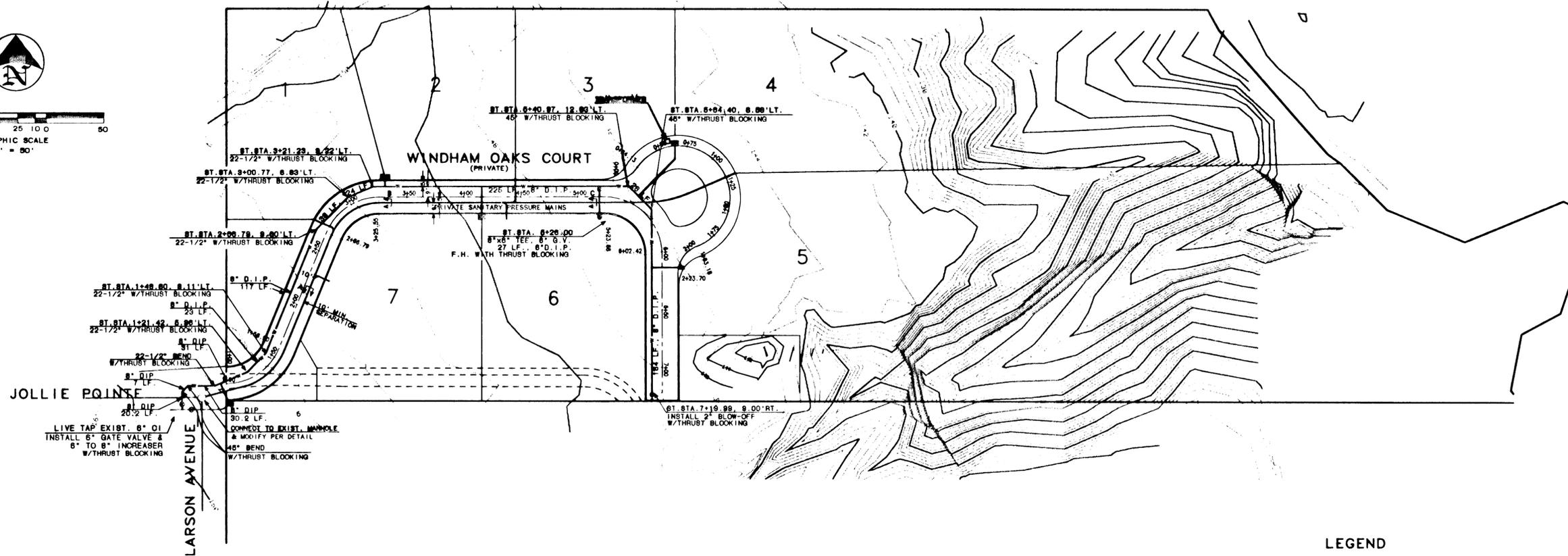
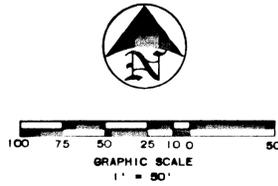
STREET AND STORM SEWER PLAN
for
WINDHAM OAKS
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



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MARY S. YOUNG STATE PARK



WILLAMETTE RIVER

AS-BUILTS

SANITARY AND WATERLINE PLAN
for
WINDHAM OAKS
CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

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	10/3/94 PER CITY
DESIGNED: B.S.S.	CHECKED: B.S.S.
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LEGEND

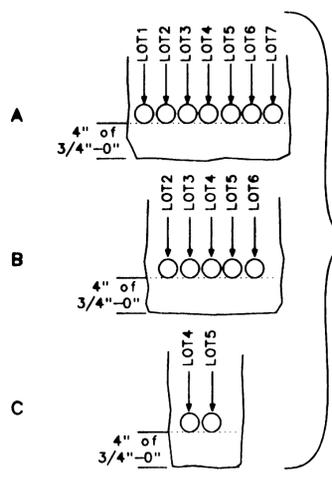
- WATER LINE
- CORRIDOR FOR 7-1 1/4" PRIVATE SANITARY LINES IN THE SAME TRENCH
- END LINE INSTALL METER BOX AND SHUT OFF VALVE
- WATER METER

WATERLINE

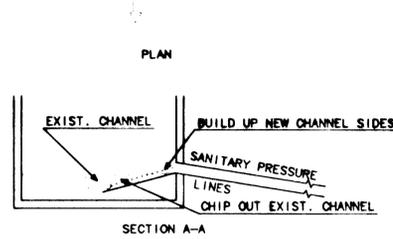
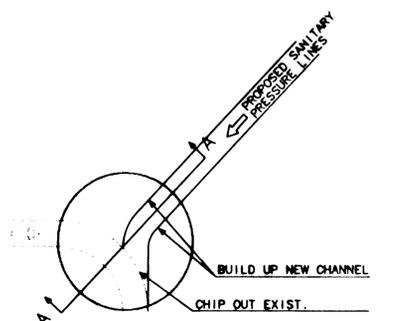
1. ALL MAINLINE PIPE SHALL BE DUCTILE IRON, CLASS 52 (AWWA C-151-76) WITH TYTON JOINTS. ALL THRUST BLOCKS, FIRE HYDRANTS, TRENCH BACKFILL, WATER SERVICES AND BLOWOFFS SHALL BE AS SHOWN ON THE DETAIL SHEETS.
2. ALL PIPE SHALL HAVE 30 INCHES MINIMUM COVER MEASURED FROM FINISH GRADE AND SHALL COMPLY WITH REGULATIONS OF THE OREGON STATE BOARD OF HEALTH AND THE DEPARTMENT OF ENVIRONMENTAL QUALITY REGARDING THE LOCATION AND SEPARATION OF WATERLINES AND SANITARY SEWERS.
3. UPON COMPLETION OF THE INSTALLATION OF THE WATER SYSTEM, ALL LINES SHALL BE FLUSHED AND DISINFECTED IN CONFORMANCE WITH HEALTH DIVISION GUIDELINES. THE CONTRACTOR SHALL PRESSURE TEST ALL LINES. TEST PRESSURE OF 150 PSI, AT THE LOWEST POINT IN THE NEW SYSTEM, SHALL BE HELD FOR TWO (2) HOURS UNTIL TEST RESULTS ARE SATISFACTORY. PIPELINES TO BE TESTED IN ACCORDANCE WITH A.P.W.A. DIVISION IV, SECTION 402.3.04. TESTING TO BE OBSERVED BY THE ENGINEERS INSPECTOR.
4. WATER SERVICES TO BE 1" COOPER (TYPE K SOFT) FOR SINGLE SERVICE. CORPORATION STOP TO BE FORD F600 AND SERVICE TEE TO BE FORD T 444-443 FITTINGS (ALL FITTINGS ARE TO BE FLANGED). METER BOXES WILL BE INSTALLED BY THE CONTRACTOR. METER STOPS TO BE FORD KVC-2W. SEE WEST LINN STANDARD DRAWING C-1.01. THERE SHALL BE A MINIMUM OF ONE (1) FOOT SEPARATION BETWEEN WATER TAPS.
5. FIRE HYDRANTS ARE TO CONFORM TO THE CITY OF WEST LINN SPECIFICATIONS.
6. GATE VALVES ARE TO BE NRS TYPE WITH 2" OPERATING NUT, COUNTER-CLOCKWISE OPENING, CONFORMING TO A.W.W.A. C500 AND CITY OF WEST LINN SPECIFICATIONS.
7. PIPELINE TO BE DISINFECTED IN ACCORDANCE WITH A.P.W.A. DIVISION IV, SECTION 402.3.05 AND THE CITY OF WEST LINN SPECIFICATIONS.
8. THE VERTICAL ALIGNMENT OF THE WATER LINE IS TO BE SIMILAR TO THE STREET PROFILES. IT IS THE CONTRACTORS RESPONSIBILITY FOR PROPER VERTICAL ALIGNMENT.
9. METER BOXES ANTICIPATED TO BE LOCATED IN DRIVEWAYS, SIDEWALKS OR OTHER PAVED AREAS ARE TO BE OF THE TYPE DESIGNED FOR SUCH LOCATIONS USE METER BOX EQUIPMENT COMPANY 66T OR 69T OR EQUAL.
10. WATERLINE INSTALLATION SHALL COMPLY WITH THE CITY OF WEST LINN'S MAXIMUM DEFLECTION STANDARDS.
11. ALL WATER VALVE BOXES TO BE VANCOUVER MDL#910, RICH#910, OR APPROVED EQUAL.

SANITARY SEWER

1. SANITARY SEWER PRESSURE SERVICE LATERALS SHALL BE SCH 40 OR SDR 21 P.V.C. PIPE.
2. ALL SERVICE LATERALS SHALL BE 1 1/4" SCH 40 OR SDR 21 PVC. LATERALS SHALL BE EXTENDED PAST UTILITY EASEMENTS AND SHALL HAVE A MINIMUM OF 30" OF COVER.
3. SANITARY SEWER LATERALS SHALL BE IDENTIFIED BY A 2"x4" MARKER EXTENDING TO A POINT AT LEAST ONE (1) FOOT ABOVE THE FINISHED GROUND SURFACE. THE 2"x4" MARKER SHALL BE PAINTED WHITE, AND THE DEPTH NOTED ON THE MARKER AND STENCILED "SANITARY" IN GREEN PAINT. USE A WATERPROOF MARKER TO MARK THE DEPTH FROM TOP OF INVERT TO GROUND SURFACE.
4. THE CONTRACTOR SHALL PRESSURE TEST ALL LINES BY A.P.W.A. PROCEDURE OR APPROVED EQUIVALENT. ALL SEWER LINES ARE TO BE AIR TESTED PER A.P.W.A. DIVISION III, SECTION 503.5.16. TESTS ARE TO BE OBSERVED BY THE ENGINEERS INSPECTOR.
5. PIPE BEDDING SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF THE CITY OF WEST LINN STANDARDS.
6. BACKFILL FOR TRENCHES WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF THE CITY OF WEST LINN STANDARDS.



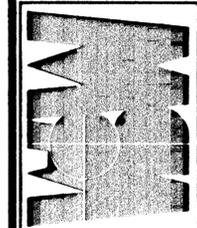
SANITARY TRENCH DETAIL



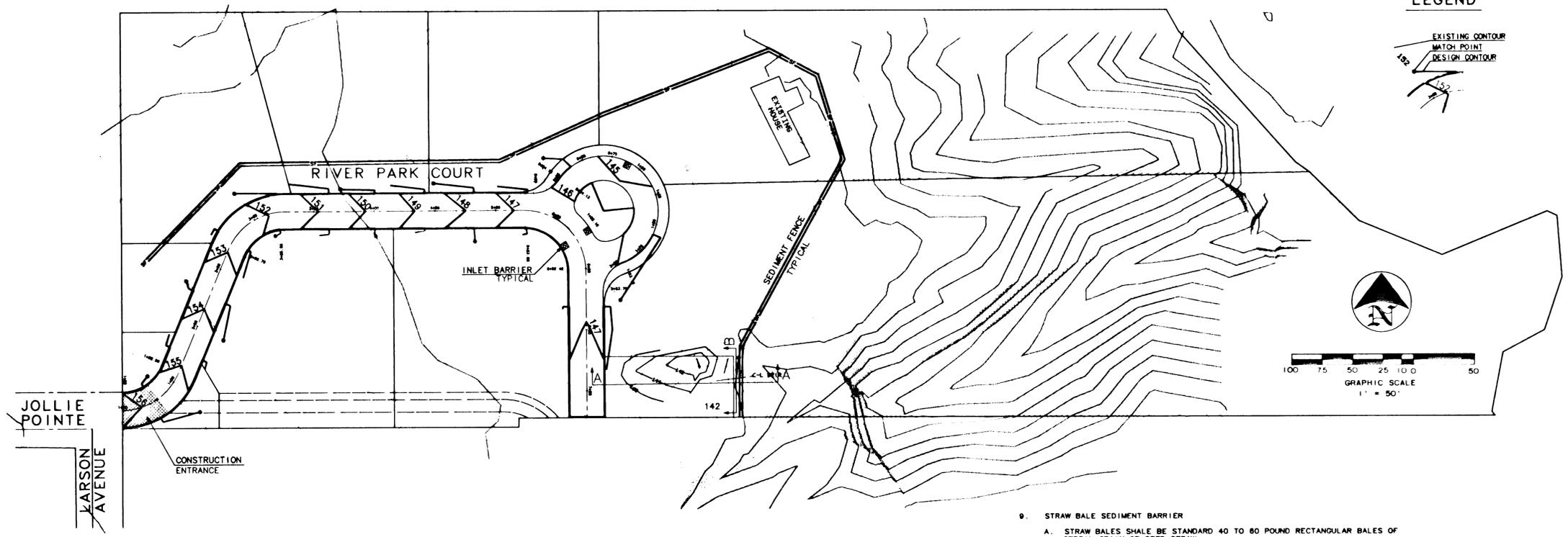
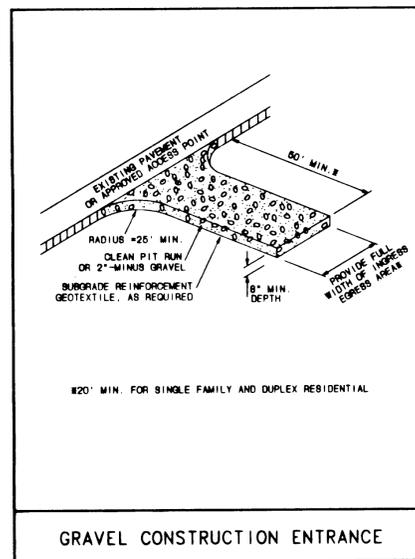
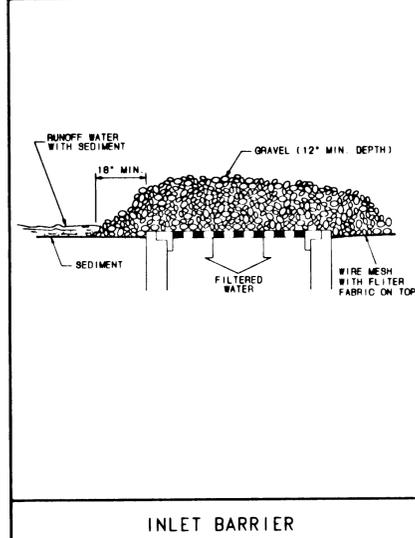
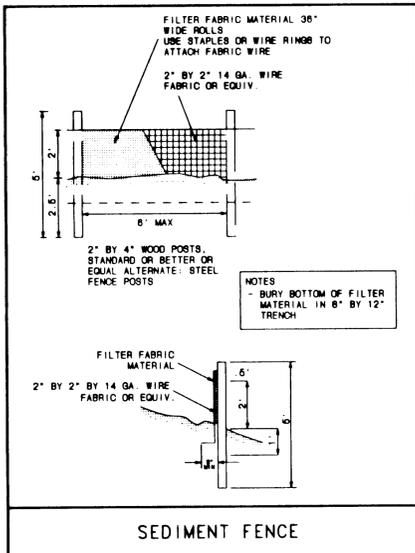
SANITARY MANHOLE MODIFICATION DETAIL



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MARY S. YOUNG STATE PARK

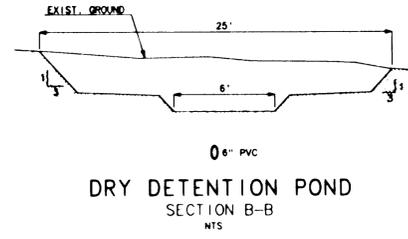
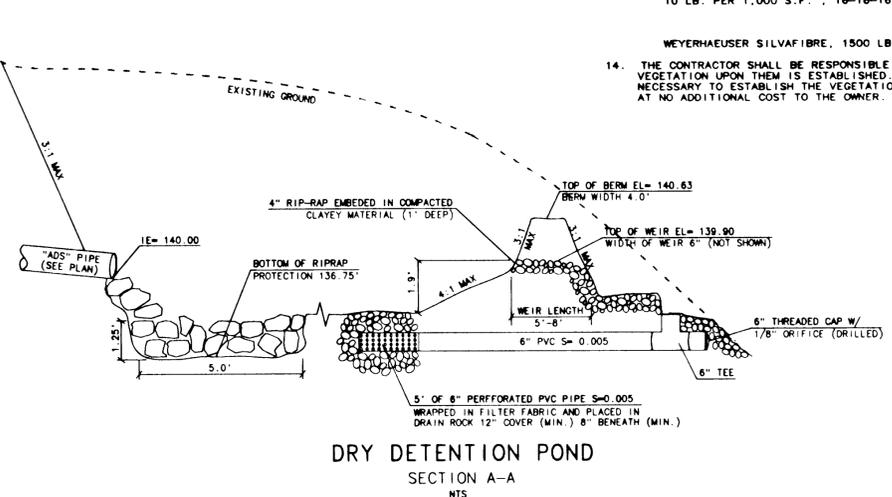


EROSION CONTROL NOTES

- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE GRADING PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- AT NO TIME SHALL MORE THAN ONE (1) 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.
- GRAVEL CONSTRUCTION ENTRANCES (SEE DETAIL)
 - STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT AT ANY SITE WHERE TRAFFIC WILL BE LEAVING THE SITE AND MOVING DIRECTLY ONTO PUBLIC ROADS, OTHER PAVED AREAS, OR OTHER APPROVED ACCESS POINTS. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEANED FOR THE DURATION OF THE PROJECT.
 - ADDITIONAL GRAVEL MAY HAVE TO BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
 - IF THE GRAVEL PAD DOES NOT ADEQUATELY REMOVE DIRT AND MUD FROM VEHICLE WHEELS SUCH THAT MUD AND DIRT TRACKING IS EVIDENT OFF-SITE, ADDITIONAL MEASURES MUST BE TAKEN. SUCH MEASURES MAY INCLUDE HOISING OFF WHEELS BEFORE OPERATIONS LEAVE THE SITE OR OTHER CONSTRUCTION TECHNIQUES/WORK OPERATIONS MODIFICATIONS. WHEEL WASHING SHOULD BE DONE ON THE GRAVEL PAD AND WASH WATER SHOULD DRAIN THROUGH A SILT-TRAPPING STRUCTURE PRIOR TO LEAVING THE CONSTRUCTION SITE.

- TEMPORARY SEDIMENT FENCES
 - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL OUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.
 - THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS WHERE FEASIBLE. THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND SECURELY DRIVEN INTO THE GROUND A MINIMUM OF 30 INCHES.
 - A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG. TIE WIRE OR HOOD RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
 - THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
 - WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF THE PRIOR STANDARD NOTE FOR STANDARD STRENGTH FILTER FABRIC APPLYING.
 - SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
 - SEDIMENT FENCES SHALL BE INSPECTED BY THE CONTRACTOR IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - AT NO TIME SHALL MORE THAN ONE FOOT DEPTH OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND A SEDIMENT FENCE. SEDIMENT SHOULD BE REMOVED OR REGRADED INTO SLOPES, AND THE SEDIMENT FENCES REPAIRED AND RE-ESTABLISHED AS NEEDED.

- STRAW BALE SEDIMENT BARRIER
 - STRAW BALES SHALL BE STANDARD 40 TO 80 POUND RECTANGULAR BALES OF CEREAL GRAIN OR SEED STRAW.
 - STAKES SHALL BE WOOD OF SIZE AS SHOWN IN DETAILS AND DRIVEN THROUGH BALES AND INTO THE GROUND TO A MINIMUM DEPTH OF 12 INCHES.
 - STRAW BALES SHALL BE KEYS INTO THE EXISTING GROUND 4 TO 6 INCHES.
 - STRAW BALE SEDIMENT BARRIERS MAY BE LEFT IN PLACE OR USED AS MULCH AFTER COMPLETION OF SITE WORK IF APPROVED BY THE ENGINEER.
 - AT NO TIME SHALL MORE THAN A ONE FOOT DEPTH OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND STRAW BALE SEDIMENT BARRIERS. SEDIMENT SHOULD BE REMOVED OR REGRADED INTO THE SLOPE, OR NEW LINES OF BARRIERS INSTALLED UPHILL OF SEDIMENT-LADEN BARRIERS.
- IMMEDIATELY AFTER THE COMPLETION OF GRADING ALL DISTURBED AREAS SHALL BE SPRAYED USING WEYERHAEUSER "SILVAFIBRE" AT A RATE OF 2400 LB PER ACRE AND "J-TAC" TACKIFIER AT A RATE OF 40 LB PER ACRE, WITHOUT SEED OR FERTILIZER.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROTECTION OF ALL WORK, ADJACENT PROPERTIES AND DOWNSTREAM FACILITIES FROM EROSION AND SILTATION DURING THE COURSE OF THE WORK. ANY DAMAGE RESULTING FROM SUCH EROSION AND SILTATION SHALL BE CORRECTED AT THE SOLE EXPENSE OF THE CONTRACTOR.
- STRAW IS TO BE PLACED ON ALL DISTURBED AREAS IMMEDIATELY AFTER COMPLETION OF EACH SECTION OF UTILITY CONSTRUCTION UNTIL THE TEMPORARY EROSION CONTROL SEEDING HAS BEEN ESTABLISHED.
- ALL DISTURBED AREAS SHALL BE HYDROSEEDED BETWEEN SEPTEMBER 1 AND MARCH 31 USING THE FOLLOWING COMPONENTS:
 - TYPE OF SEED MIX
 - 25% ELKA DWARF PERENNIAL RYE
 - 25% ENSYLVIA DWARF PERENNIAL RYE
 - 35% ANNUAL RYEGRASS
 - 15% WHITE CLOVER
 - RATE OF SEEDING
 - 300 LB PER ACRE
 - FERTILIZER
 - 10 LB. PER 1,000 S.F., 16-16-16 SLOW RELEASE TYPE.
 - WEYERHAEUSER SILVAFIBRE, 1500 LB. PER ACRE
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HYDROSEEDING AREAS UNTIL VEGETATION UPON THEM IS ESTABLISHED. ANY ADDITIONAL HYDROSEEDING NECESSARY TO ESTABLISH THE VEGETATION SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.



REVISIONS

9/1/94	NEE PER BSS		
10/9/94	PER CITY		
		DESIGNED: B.S.S.	CHECKED: B.S.S.
		DRAWN: R.R.T.	DATE: 8-31-94
		JOB NO.: 94-130	SCALE: 1" = 50'

AS-BUILT

WILLAMETTE RIVER

GRADING & EROSION CONTROL PLAN

for

WINDHAY OAKS

CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON



W.B. WELLS & ASSOCIATES, INC.

ENGINEERS-SURVEYORS-PLANNERS

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