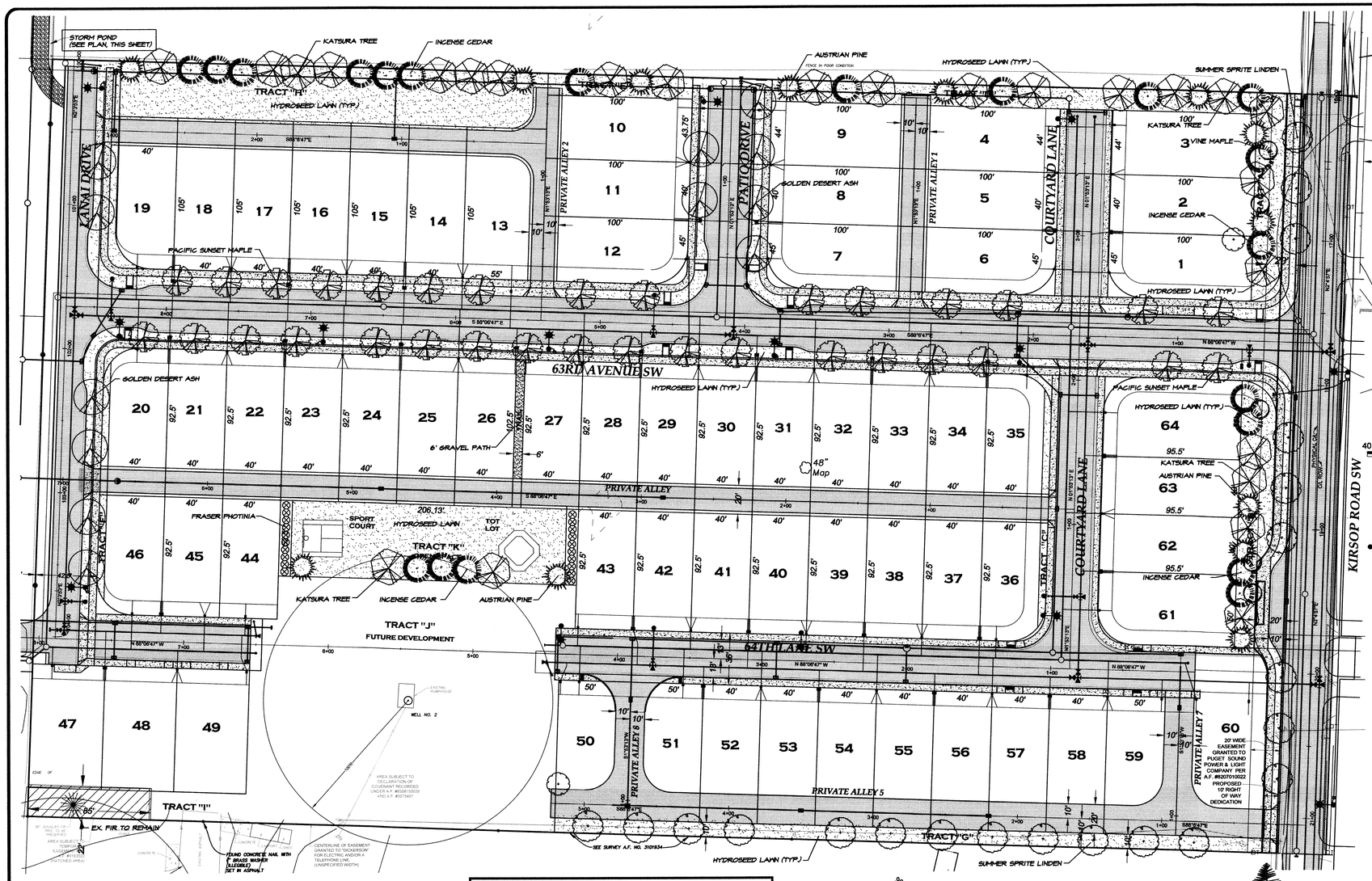
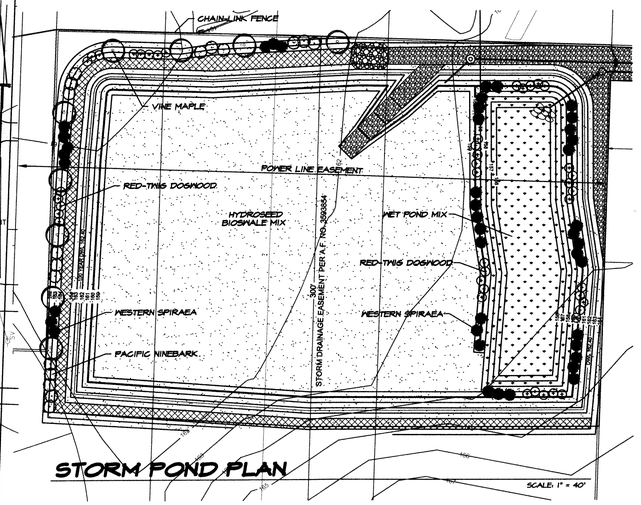




STORM POND PLAN

SCALE: 1" = 40'

40 20 0 40 80

SCALE: 1" = 40'

INSTALLATION SPECIFICATIONS

1. SCARIFY OR OTHERWISE REMOVE ALL EXISTING VEGETATION FROM ALL PLANTING AREAS. FINE GRADE ALL LANDSCAPE BEDS PRIOR TO BARK OR GROUNDCOVER PLACEMENT.

2. NO PLANT SUBSTITUTIONS WILL BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT AND THE CITY OF TUMWATER.

3. ALL PLANT MATERIAL AND PLANT LOCATIONS SHALL BE APPROVED, AT THE REQUES' OF THE LANDSCAPE ARCHITECT, PRIOR TO INSTALLATION. ALL PLANTS SHALL BE THOROUGHLY WATERED IMMEDIATELY AFTER PLANTING.

4. SOIL MIX FOR BED PREPARATION AND PLANTING BACKFILL SHALL BE A 3-WAY LANDSCAPE BLEND CONSISTING OF THE FOLLOWING: 33% (MAX) IMPORTED BLACK SANDY LOAM TOPSOIL, 33% (MIN) PEATMOSS OR COMPOSTED FIR CHIPS OR BARK, AND 33% COMPOSTED STEER MANURE OR MUSHROOM COMPOST. OTHER SOIL MIX PRODUCTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO USE.

5. SOIL PREPARATION: SPREAD TO A MINIMUM DEPTH OF 4 INCHES (12 CUBIC YARDS PER 1000 S.F.) OF SOIL MIX PER NOTE 4, IN ALL GROUNDCOVER AND PLANTING BEDS. ROTOTILL OR OTHERWISE THOROUGHLY INCORPORATE SOIL MIX TO A 5 TO 6 INCH DEPTH, GRADE SMOOTH, AND REMOVE ALL ROCKS AND CLODS OVER 1 INCH DIAMETER.

6. BACKFILL MIX FOR ALL TREES AND SHRUBS TO BE 1/3 EXISTING SITE TOPSOIL AND 2/3 SOIL MIX PER NOTE 4. REFER TO PLANS AND DETAILS REGARDING INSTALLATION OF PLANT MATERIALS.

7. FERTILIZER FOR ALL PLANTS SHALL BE AGRIFORM 20-10-5, 21 GRAM OR 10 GRAM TABLETS DISTRIBUTED AS FOLLOWS: TREES 4-21 GRAM TABLETS, SHRUBS 2 GAL SIZE AND LARGER 3-21 GRAM TABLETS, 1 GAL SIZE SHRUBS 1-21 GRAM TABLET, ALL 4" POTS 1 - 5 GRM TABLET OR EQUIVALENT EACH. SET TABLETS DIRECTLY NEXT TO ROOT BALL. GRANULAR EQUIVALENT FERTILIZER IS ACCEPTABLE WITH PRIOR AUTHORIZATION FROM THE LANDSCAPE ARCHITECTS.

8. ALL SHRUB AND GROUNDCOVER BEDS SHALL RECEIVE 2 INCH MINIMUM DEPTH (6 CUBIC YARDS PER 1000 S.F.) OF HEM-FIR MEDIUM BARK MULCH. PLANT 4" POT GROUNDCOVERS INTO SOIL MIX PER NOTE 5 ABOVE, PLANTS PLANTED IN BARK MULCH ONLY ARE NOT ACCEPTABLE.

9. APPLY A GRANULAR OR SOLUBLE PRE-EMERGENT HERBICIDE AS APPROVED BY THE LANDSCAPE ARCHITECT TO ALL SHRUB AND GROUNDCOVER BEDS PRIOR TO DISTRIBUTI OF BARK MULCH.

10. SOIL PREPARATION FOR TURF AREAS: SPREAD 4" DEPTH (12 CUBIC YARDS PER 100 S.F.) SOIL MIX AS PER NOTE 4 AND ROTOTILL THE ABOVE TO A DEPTH OF 6 TO 8 INCHES, GRADE SMOOTH, REMOVE ALL ROCKS AND CLODS OVER 1 INCH DIAMETER, AND ROLL SMOOTH WITH WATER FILLED ROLLER.

11. TURF AREAS SHALL BE SEEDED, FERTILIZED AND MULCHED IN A HYDRAULIC APPLICATION BY CONVENTIONAL SEEDING EQUIPMENT. SEED SHALL BE A MINIMUM FOUR WAY MIXTURE OF PERENNIAL RYEGRASS VARIETIES AT A RATE NOT LESS THAN 2.5 LBS PER 1000 S.F.. LANDSCAPE ARCHITECT SHALL APPROVE MULCH/FERTILIZER TYPE AND RATES PRIOR TO APPLICATION. WATER TURF AREAS WITHIN 1 HOUR OF APPLICATION.

12. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND OWNER. ALL PLANTS SHALL BE GUARANTEED FOR ONE FULL YEAR FRO DATE OF ACCEPTANCE. ALL REPLACEMENTS SHALL BE RE-GUARANTEED FOR ANOTHER FULL YEAR FROM DATE OF INSTALLATION.

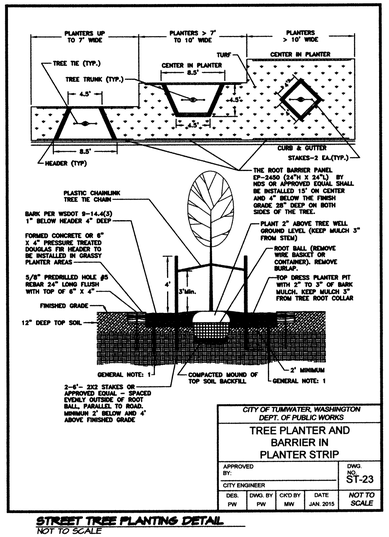
13. THE OWNER SHALL MAINTAIN ALL LANDSCAPE AREAS AND PLANT MATERIALS IN ACCORDANCE TO LOCAL ORDINANCES.

NEWLY PLANTED TREES ON LOTS

PLANTING OF NEW TREES ON INDIVIDUAL LOTS SHALL BE REQUIRED AT A RATE OF ONE TREE FOR EVERY FOUR THOUSAND SQUARE FEET OF LOT AREA. THERE IS APPROXIMATELY 334,332 SQUARE FEET OF LOT AREA WHICH WILL REQUIRE 84 NEWLY PLANTED TREES ON THE INDIVIDUAL LOTS.

PLANT SCHEDULE

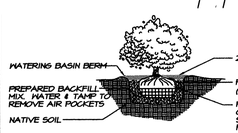
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	LOCATION/ NOTES
Dec.Trees					
	14	Acer circinatum	Vine Maple	2" CAL. MIN.	Open Space & Storm Pond
	12	Fraxinus excel. 'Aureafolia'	Golden Desert Ash	2" CAL. MIN.	Lanal & Patio Dr.
	25	Cercidophyllum japonicum	Katsura Tree	2" CAL. MIN.	Open Space
	23	Tilia cordata 'Halka'	Summer Sprite Linden	2" CAL. MIN.	Kirsop Rd & O.S.
	33	Acer trunc. x platanoides 'Warrenred'	Pacific Sunset Maple	2" CAL. MIN.	63rd Ave
Con.Trees					
	20	Calocedrus decurrens	Incense Cedar	6'-8' HT.	Open Space
	13	Pinus nigra	Austrian Pine	6'-8' HT.	Open Space
Shrubs					
⊗	20	Photinia fraseri	Fraser Photinia	5 GAL.	Open Space
⊙	48	Cornus stolonifera	Red-Twig Dogwood	2 GAL.	Storm Pond
⊙	17	Physocarpus capitatus	Pacific Ninebark	2 GAL.	Storm Pond
●	42	Spiraea douglasii	Western Spirea	2 GAL.	Storm Pond
Wet-Pond Mix	1000 (equal mix 20 groups of 10 each)	Wet-Pond Mix: Scirpus acutus, Scirpus microcarpus, Sparganium emersum, Sparganium eurycarpum, Veronica sp.	Hardstem Bulrush, Small Fruited Bulrush, Burreed, Burreed, Marsh Speedwell	PLUGS @36" O.C.	Storm Pond
					156'-157' EL.
					157'-158' EL.
					157'-158' EL.
					157'-158' EL.
					158'-159' EL.



STREET TREE PLANTING DETAIL
NOT TO SCALE

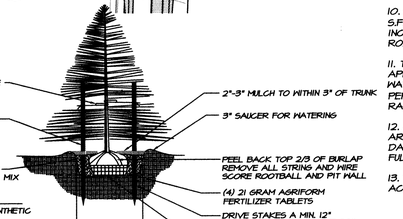
CITY OF TUMWATER, WASHINGTON
DEPT. OF PUBLIC WORKS
TREE PLANTER AND BARRIER IN PLANTER STRIP

APPROVED BY:		DWG. NO. ST-23
CITY ENGINEER		
DES. PW	DWG. BY PW	CK'D BY MW	DATE JAN. 2015	NOT TO SCALE



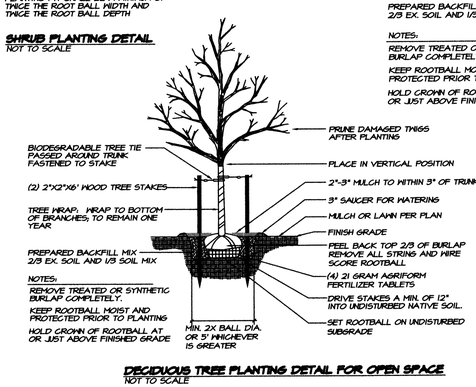
NOTES:
PLANTING PIT SHALL BE A MINIMUM OF THRICE THE ROOT BALL WIDTH AND THRICE THE ROOT BALL DEPTH

SHRUB PLANTING DETAIL
NOT TO SCALE



NOTES:
REMOVE TREATED OR SYNTHETIC BURLAP COMPLETELY.
KEEP ROOTBALL MOIST AND PROTECTED PRIOR TO PLANTING
HOLD CROWN OF ROOTBALL AT OR JUST ABOVE FINISHED GRADE

CONIFEROUS TREE PLANTING DETAIL
NOT TO SCALE



NOTES:
REMOVE TREATED OR SYNTHETIC BURLAP COMPLETELY.
KEEP ROOTBALL MOIST AND PROTECTED PRIOR TO PLANTING
HOLD CROWN OF ROOTBALL AT OR JUST ABOVE FINISHED GRADE

DECIDUOUS TREE PLANTING DETAIL FOR OPEN SPACE
NOT TO SCALE

OPEN SPACE CALCULATIONS

USE OF TRACTS
"A" - TREE TRACT.....0.07 AC.
"B" - TREE TRACT.....0.09 AC.
"C" - TREE TRACT.....0.02 AC.
"D" - TREE TRACT.....0.12 AC.
"E" - TREE TRACT.....0.03 AC.
"F" - TREE TRACT.....0.02 AC.
"G" - TREE TRACT.....0.11 AC.
"I" - TREE TRACT.....0.07 AC
"H" - TREE TRACT.....0.27 AC.
"K" - ACTIVE RECREATION.....0.26 AC.
"L" - TREE TRACT.....0.01 AC

0.889 AC. 8.5% OF GROSS SITE AREA

TOTAL OPEN SPACE - 1.07 ACRES (10% OF GROSS AREA)

APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____
TUMWATER COMMUNITY PLANNING & DEVELOPMENT

APPROVAL EXPIRES: _____

DESIGNED BY: CA/DL
DRAWN BY: DL
CHECKED BY: CA
DATE: DEC 2005
SCALE: H 1"=40' V

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT CHRISTIAN L. ALBRICH CERTIFICATE NO. 886 EXPIRES ON 4-9-2015
2-11-17

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

REVISIONS:	DATE:
CITY COMMENTS	05/13/15
64 LOT UPDATE	3/28/17
PLAT UPDATE	8/21/17

KIRSOP TOWNHOMES
6335 KIRSOP ROAD SW, TUMWATER, WA 98512
TF# 7990000300
A PORTION OF THE SE¼ OF THE NE¼ OF SECTION 5, TOWNSHIP 17 N, RANGE 2 WEST, W.M.

LANDSCAPE PLAN

TUM-15-0261
AGENCY NO. 2003103430
SHEET: 52 OF 53
E:/landscape/01-000/01-091
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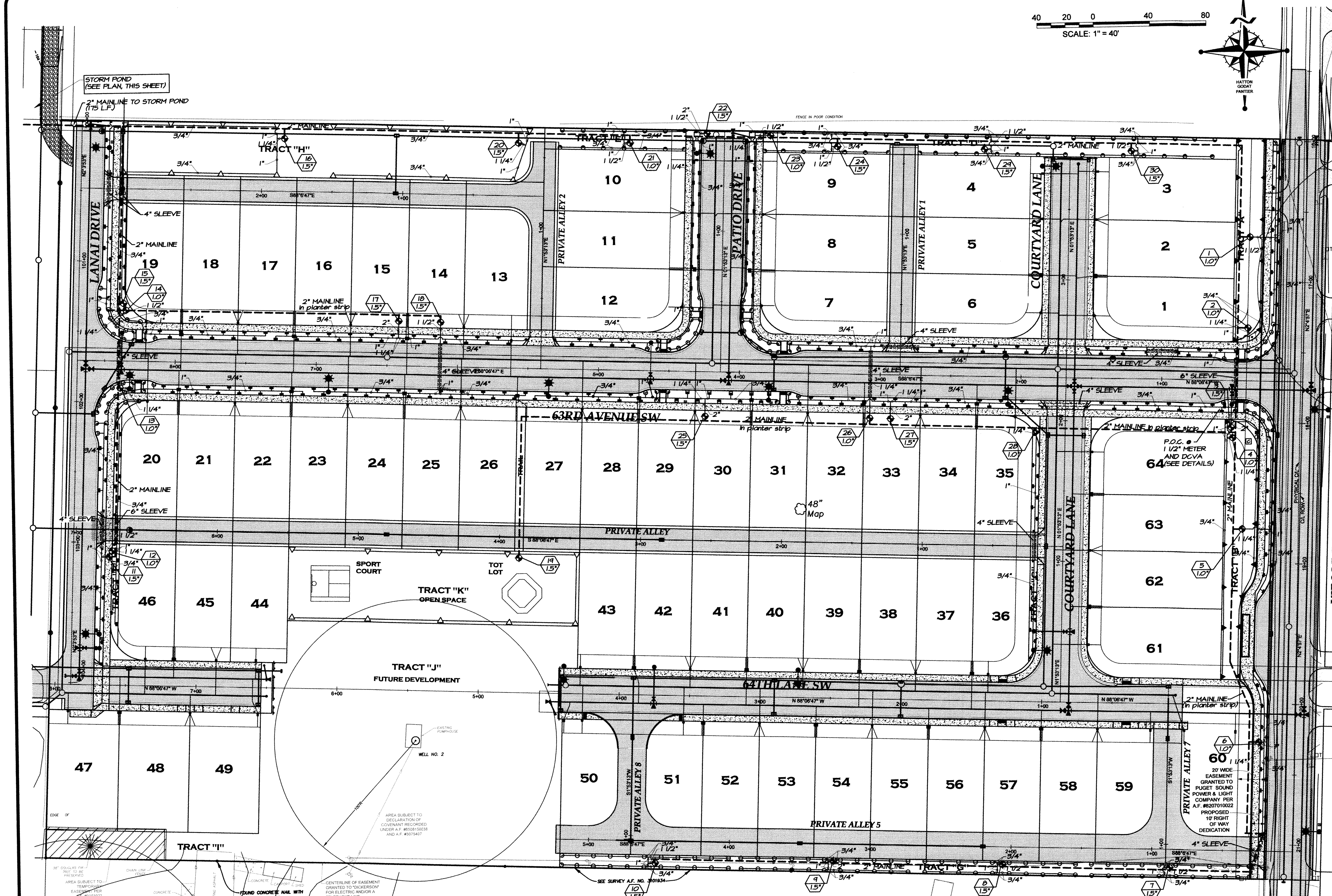
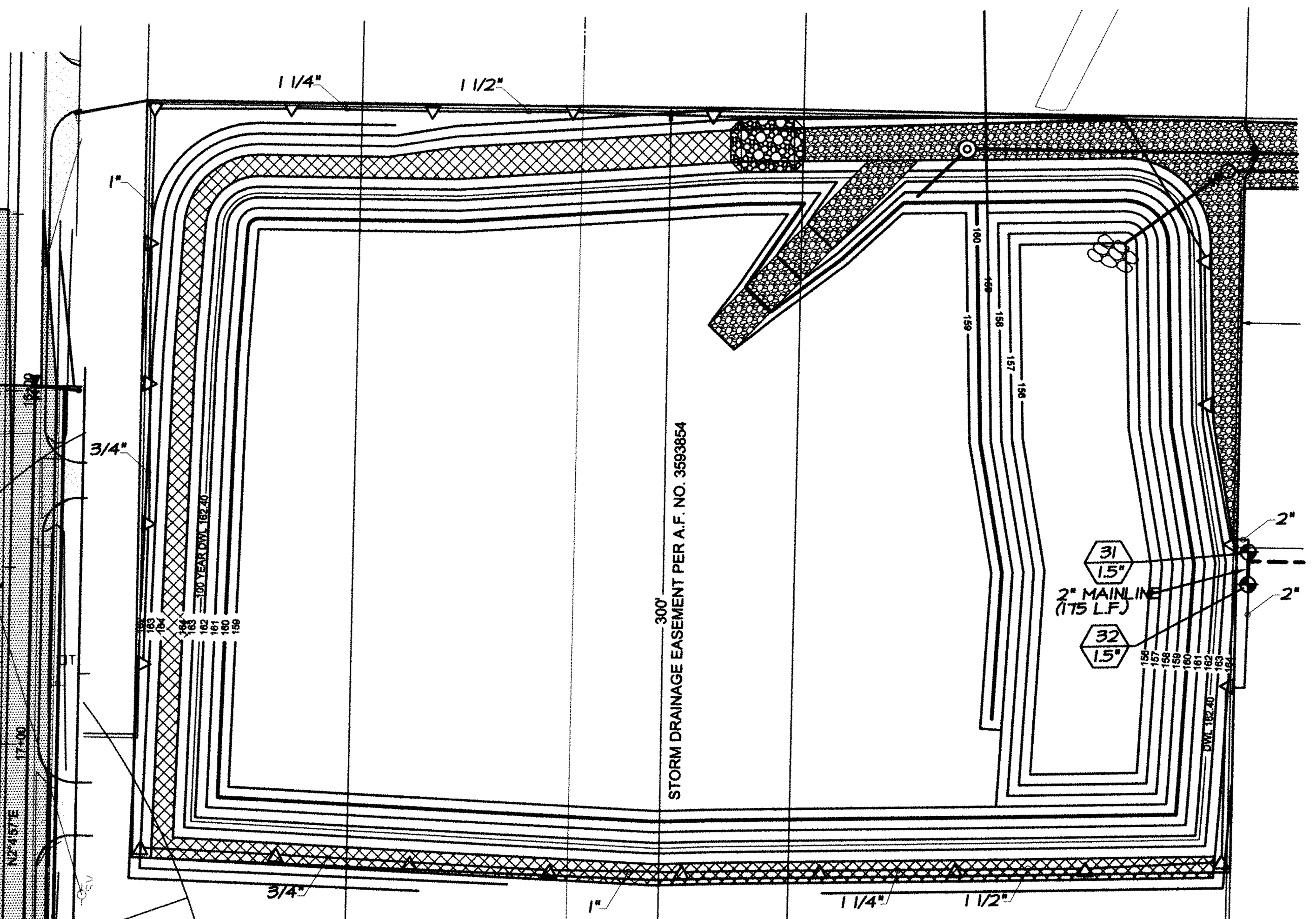
JOB: 01-091





STORM POND PLAN

SCALE: 1" = 40'

PARTS SPECIFICATIONS

MFR/PART NO.	DESCRIPTION/INSTALLATION	RAD	GPM	PSI
RAINBIRD PEB 150-PEB	PEB SERIES ELECTRIC REMOTE CONTROL VALVES, INSTALLED WITH (1) PVC UNION (LATERAL SIDE) AND VALVE BOX (USE COMMON BOXES WHERE POSSIBLE). SEE INSTALLATION DETAIL			
RAINBIRD 1800	1800 SERIES 6" POP UP SPRAY HEADS WITH MPR PLASTIC NOZZLES (SEE BELOW). INSTALL ALL 1800 HEADS ON (2) MARLEX BARBED ELBOWS AND 12" TO 18" FLEXIBLE POLYETHYLENE PIPE SWING JOINT. SEE INSTALLATION DETAIL.			
1800-8Q 1800-8H	8 SERIES MPR - 10 DEGREE TRAJECTORY, ADJUST ARC TO FIT	8 8	.26 .52	30 30
1800-10Q 1800-10H	10 SERIES MPR - 10 DEGREE TRAJECTORY, ADJUST ARC TO FIT	10 10	.39 .79	30 30
1800-12Q 1800-12H 1800-12TQ	12 SERIES MPR - 10 DEGREE TRAJECTORY, ADJUST ARC TO FIT	12 12 12	.65 1.30 1.95	30 30 30
1800-15Q 1800-15T 1800-15H 1800-15TQ 1800-15F	15 SERIES MPR - 30 DEGREE TRAJECTORY, ADJUST ARC TO FIT	15 15 15 15 15	.92 1.23 1.85 2.80 3.70	30 30 30 30 30
1800-15SST	15 STRIP SERIES - 4x30 FT SIDE STRIPS	4x30	1.21	30
1800-15EST	15 STRIP SERIES - 4x15 FT END STRIPS	4x15	0.61	30
1800-9SST	9 STRIP SERIES - 9x18 FT END STRIPS	9X18	1.73	30
RAINBIRD 3500				
5004-PC	5000 MODEL, NOZZLE 4.0, ADJUSTABLE ARC 40-360 DEGREE, 25 DEGREE TRAJECTORY, ADJUST ARC TO FIT	40	3.5	35
5004-PC	5000 MODEL, NOZZLE 1.5, ADJUSTABLE ARC 40-360 DEGREE, 25 DEGREE TRAJECTORY, ADJUST ARC TO FIT	35	1.35	35
FEBCO 850U	DOUBLE CHECK VALVE BACKFLOW ASSEMBLY, 1 1/2" SIZE INSTALL WITH (1) GALVANIZED UNION AND JUMBO VALVE BOX			
RAINBIRD ESP-32MC-SS	SOLID STATE ELECTRONIC CONTROLLER WITH STAINLESS STEEL PEDESTAL. 32 STATION CAPACITY WITH INTERNAL TRANSFORMER. ROUTE ALL POWER SUPPLY AND LOW VOLT WIRES IN CONDUIT PER N.E.C. REQUIREMENTS.			
CHAMPION 200RS-150	BRASS MANUAL DRAIN VALVE. SEE INSTALLATION DETAIL INSTALL AT ALL MAINLINE LOW POINTS (NOT SHOWN)			
CHAMPION QCV-100VL	BRASS QUICK COUPLER VALVE, SINGLE LUG WITH LOCKING COVER. PROVIDE (1) KEY WITH HOSE SWIVEL. INSTALL AS DETAILED.			
NOT SHOWN	LOW VOLT WIRING SHALL BE 14 GA. SINGLE STRAND UF/UL LISTED. WHITE=COMMON, RED=SIGNAL. NO IN-LINE SPLICES, SPLICE AT VALVES WITH 3M WEATHER PROOF CONNECTORS OR APPROVED EQUAL.			
MAINLINES LATERALS	PRESSURE MAINLINE AND LATERALS SHALL BE SCH. 40 PVC, SOLVENT WELDED. TEFLON TAPE ALL THREADED JOINTS. BURY DEPTH: MAINS=18 INCHES, LATERALS= 12 INCHES MIN. SEE NOTES BELOW FOR PIPE BEDDING.			
SLEEVES	SLEEVES SHALL BE ESCH. 40 PVC, SIZE 2 TIMES PIPE SIZE. SEE NOTES BELOW FOR SLEEVE INSTALLATION.			

NOTES

1. THIS PLAN IS DIAGRAMMATIC. ALL PIPING, VALVES, HEADS, ETC. SHALL BE INSTALLED IN COMMON TRENCHES WHERE POSSIBLE. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED TO OBTAIN COMPLETE COVERAGE. ADJUST LOCATION OF HEADS, ARCS, AND RADIUS AS NECESSARY.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLETE DRAINABILITY OF SYSTEM. ALL LATERALS AND MAINLINES SHALL SLOPE TO DRAIN LOCATIONS(S) WHERE INDICATED.
3. REFER TO DETAIL DRAWINGS FOR INSTALLATION AND FURTHER SPECIFICATIONS. IF DETAIL NOT PROVIDED, CONTRACTOR SHALL USE MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
4. ALL MAINLINE PIPES SHALL BE PRESSURE TESTED PRIOR TO BACKFILL. PRESSURE TEST SHALL BE AT MAXIMUM LINE PRESSURE HELD FOR 1 HOUR WITH LESS THAN 5 PERCENT PRESSURE LOSS, OR 100 PSI FOR 15 MINUTES WITH LESS THAN 5% STATIC PRESSURE LOSS.
5. BACKFILL AROUND MAINLINES AND LATERALS SHALL BE FREE OR ROCKS AND DEBRIS. PIPE BEDDING MATERIAL SHALL BE SAND OR FINE SOILS WITH NO ROCKS LARGER THAN 1 INCH.
6. NO IN-LINE WIRE SPLICES WILL BE ALLOWED. SUPPLY VALVE BOXES (AMETEK, CARSON, OR EQUAL 12" STANDARD) AT COMMON VALVE LOCATIONS. CONTROL WIRES SHALL BE BUNDLED AND TAPED TO MAIN EVERY 20 FEET. RUN WIRES IN COMMON TRENCH. USE ONLY WATERPROOF CONNECTORS AS SPECIFIED AT VALVE CONNECTIONS.
7. CONTRACTOR SHALL PROVIDE SLEEVES IN LOCATIONS SHOWN. SLEEVE DEPTH SHALL BE 18 INCHES BELOW FINISH GRADE, AND EXTEND BEYOND CURB OR EDGE OF PAVEMENT A MINIMUM OF 12 INCHES. SEE SPECS FOR SLEEVE TYPE. TAPE ENDS OF SLEEVES TO BE USED FOR FUTURE PIPES, AND PROVIDE MARKER POST.
8. CONTRACTOR SHALL PROVIDE OWNER WITH A SET OF "AS-BUILT" RECORD DRAWINGS SHOWING ACTUAL LOCATIONS OF ALL SPRINKLER SYSTEM EQUIPMENT. CONTRACTOR SHALL ORIENT OWNER WITH COMPLETE SYSTEM OPERATION AND MAINTENANCE PROCEEDURES.
9. CONTRACTOR SHALL GUARANTEE IN WRITING ALL MATERIALS AND WORKMANSHIP FOR ONE FULL YEAR FOLLOWING FINAL ACCEPTANCE OF SYSTEM INSTALLATION.

LATERAL LINE PIPE SIZE SPECIFICATIONS:

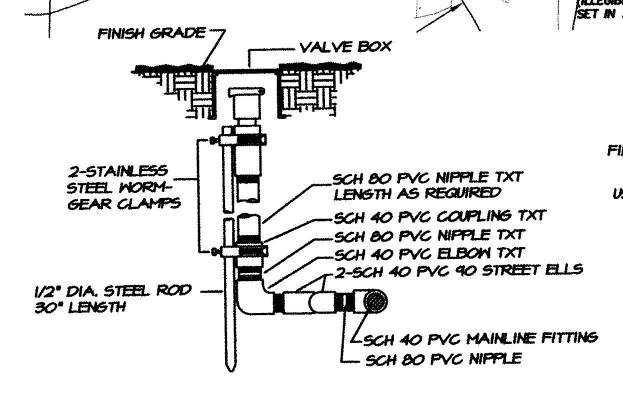
PVC LATERAL SEGMENTS SHALL BE SIZED BY CONTRACTOR DURING INSTALLATION SUCH THAT THE FLOW SHALL NOT EXCEED 4 FEET PER SECOND, OR THE FOLLOWING GALLONS PER MINUTE:

CL.200 SIZE	MAX G.P.M
3/4"	8
1"	14
1 1/4"	22
1 1/2"	28
2"	45

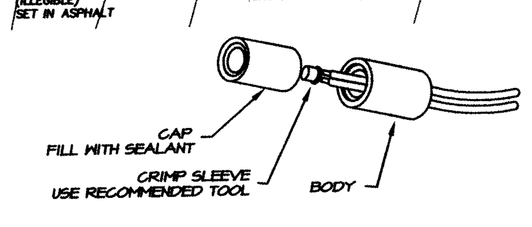
KEY: 1 — ZONE NUMBER; 1.5" — VALVE SIZE, SEE CHART

VALVE CHART

ZONE	SIZE	FLOW	DESCRIPTION
1	1.0"	22.6	TURF STRIP POP-UPS
2	1.0"	16.2	OPEN SPACE ROTORS
3	1.5"	32.3	TURF STRIP POP-UPS
4	1.0"	21.6	OPEN SPACE ROTORS
5	1.0"	20.0	TURF STRIP POP-UPS
6	1.0"	19.4	TURF STRIP POP-UPS
7	1.5"	27.3	OPEN SPACE POP-UPS
8	1.5"	26.0	OPEN SPACE POP-UPS
9	1.5"	28.6	OPEN SPACE POP-UPS
10	1.5"	27.3	OPEN SPACE POP-UPS
11	1.5"	25.4	TURF STRIP POP-UPS
12	1.0"	18.7	OPEN SPACE POP-UPS
13	1.0"	19.2	TURF STRIP POP-UPS
14	1.0"	18.4	TURF STRIP POP-UPS
15	1.5"	25.7	TURF STRIP POP-UPS
16	1.5"	28.0	OPEN SPACE ROTORS
17	1.5"	29.6	TURF STRIP POP-UPS
18	1.5"	25.4	TURF STRIP POP-UPS
19	1.5"	35.0	PARK ROTORS
20	1.5"	28.0	OPEN SPACE ROTORS
21	1.0"	23.2	OPEN SPACE POP-UPS
22	1.5"	32.3	TURF STRIP POP-UPS
23	1.0"	24.5	TURF STRIP POP-UPS
24	1.5"	25.0	OPEN SPACE POP-UPS
25	1.5"	31.9	TURF STRIP POP-UPS
26	1.0"	21.0	TURF STRIP POP-UPS
27	1.5"	28.3	TURF STRIP POP-UPS
28	1.0"	19.4	OPEN SPACE POP-UPS
29	1.5"	26.8	OPEN SPACE POP-UPS
30	1.5"	27.7	OPEN SPACE POP-UPS
31	1.5"	38.5	STORM POND ROTORS
32	1.5"	38.5	STORM POND ROTORS



QUICK COUPLER VALVE
NOT TO SCALE



TYPICAL WIRE CONNECTION
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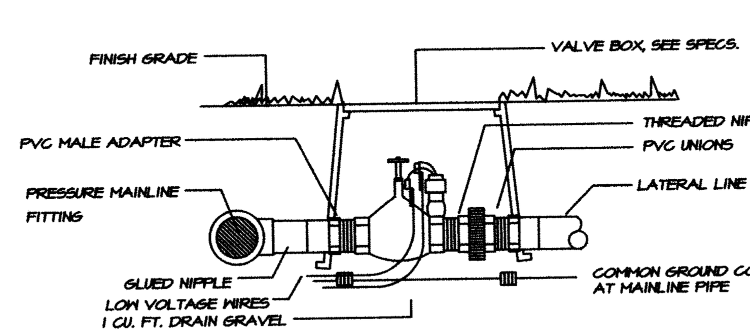

ELECTRIC CONTROL VALVE
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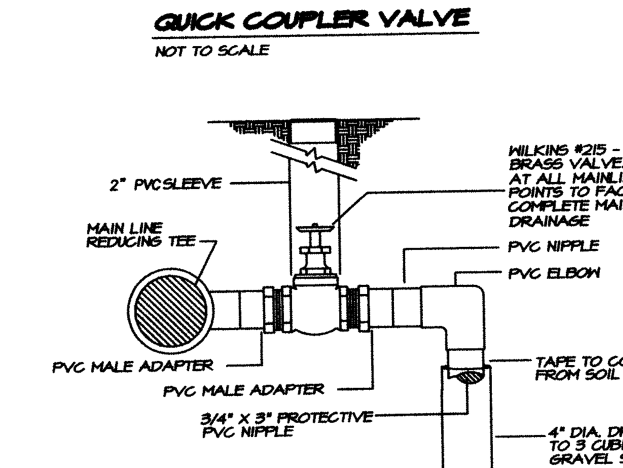
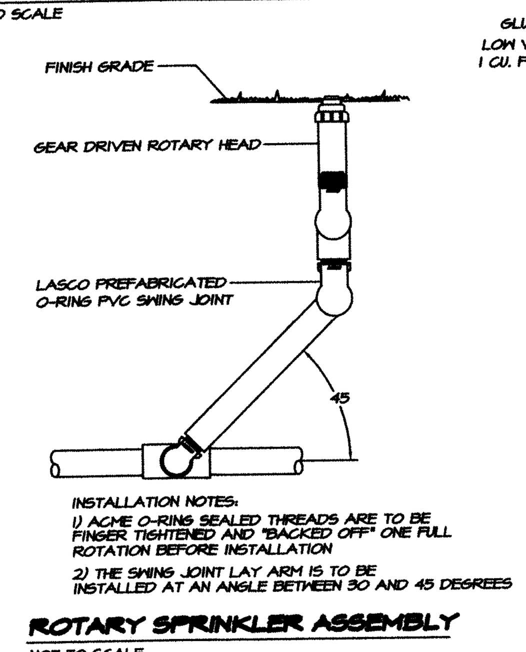
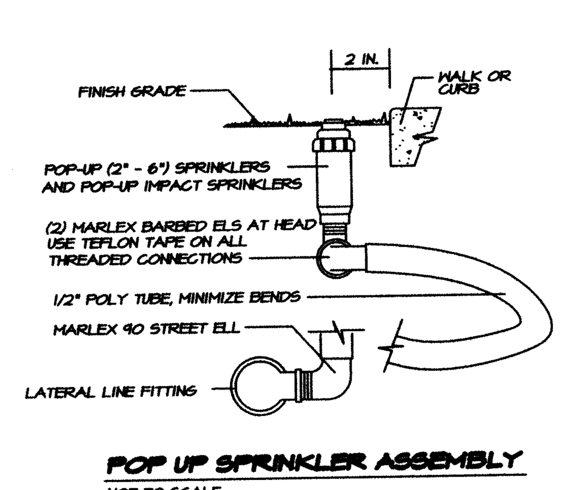


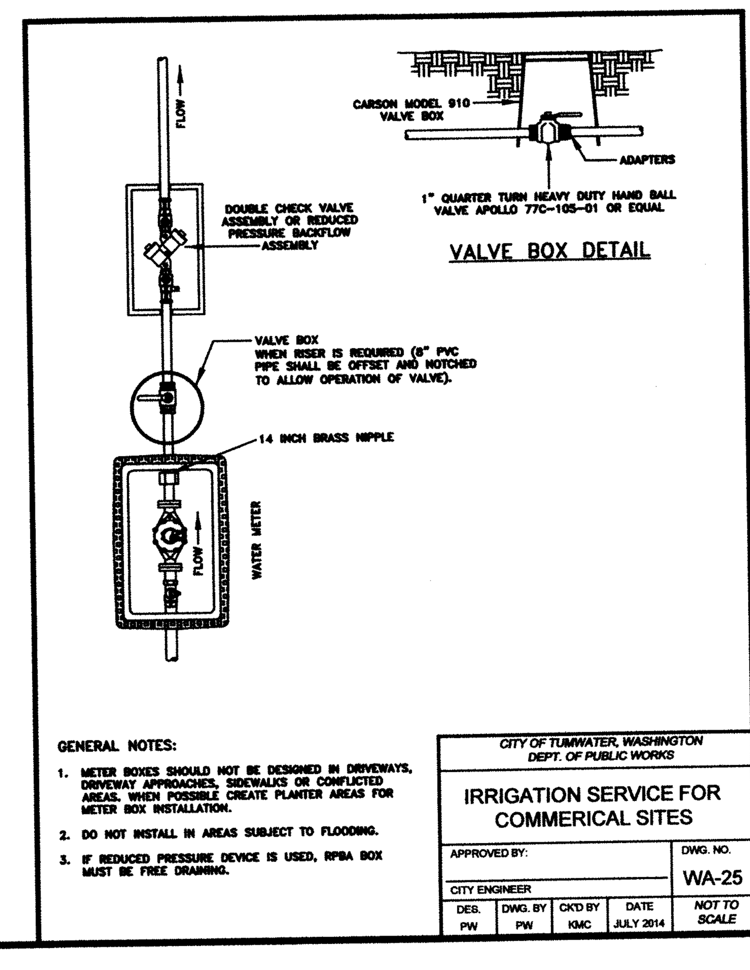
MANUAL DRAIN VALVE
NOT TO SCALE



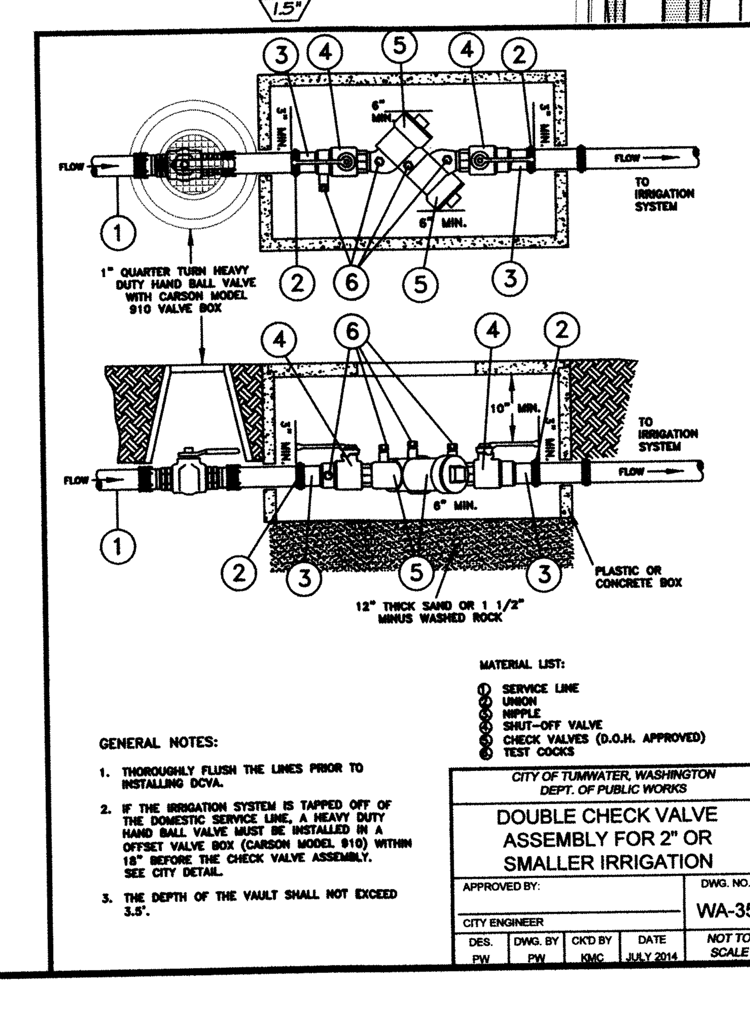
ROTARY SPRINKLER ASSEMBLY



POP UP SPRINKLER ASSEMBLY
NOT TO SCALE



IRRIGATION SERVICE FOR COMMERICAL SITES — DWG. NO. WA-25



DOUBLE CHECK VALVE ASSEMBLY FOR 2" OR SMALLER IRRIGATION — DWG. NO. WA-35

APPROVED FOR CONSTRUCTION

BY: ______________________ DATE: __________
TUMWATER COMMUNITY PLANNING & DEVELOPMENT

APPROVAL EXPIRES: ______________________

TP# 79900002300

DESIGNED BY: CA/DL
DRAWN BY: DL
CHECKED BY: CA
DATE: DEC 2005
SCALE: H 1"=40'
V

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
CHRISTIAN L. ALDRICH
CERTIFICATE NO. 585
EXPIRES ON 4-5-2018
7-11-17

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

REVISIONS:	DATE:
CITY COMMENTS	05/13/15
64 LOT UPDATE	3/28/17
PLAT UPDATE	6/21/17

KIRSOP TOWNHOMES
6335 KIRSOP ROAD SW, TUMWATER, WA 98512
IRRIGATION PLAN

A PORTION OF THE SE 1/4 OF THE NE 1/4 OF SECTION 5, TOWNSHIP 17 N, RANGE 2 WEST, W.M.

TUM-15-0261
AGENCY NO. 2003103430
SHEET: 53 OF 53
E:/landscape/01-000/01-091
INDEX: 01-091-LA3.dwg
JOB: 01-091