CONSTRUCTION DRAWINGS FOR PUBLIC IMPROVEMENTS

WESTOWN MEADOWS

PLAT 2

WAUKEE

AS-BUILTS

STORM WATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

Location: Part Sec. 4, T78N, R26W.
Nature of Construction Activity: Residential development.
Areas: Total site area = 18.745 acres
Site area affected = 26.74 acres
Runoff coefficient = 0.40 (rational method)
Approximate slopes anticipated: 3:1, or flatter.
Runoff from this project will flow into unnamed ditches which will flow into the Sugar Creek.

Erosion and sediment controls
- Stabilization practices
  - Existing vegetation is preserved whenever possible.
  - Permanent seeding and/or sodding.
- Structural practices
  - Silt fences
  - Drainage swales
  - Rock outlet protection (riprap)
- Storm water management
  - Infiltration of runoff onsite.
  - Velocity dissipation devices at discharge locations to provide non-erosive velocity flows.
- Waste disposal
  - All building material wastes must be removed from the site.
  - Off-site vehicle tracking of sediments shall be minimized.

MAINTENANCE

Maintain effective operating conditions of all protective measures identified in this plan.
- Silt fencing is cleaned when they have lost 50% of their capacity.
- Drainage swales remain undisturbed.
- Rock outlet protection (riprap) remains intact.
- Clean spilled debris by the end of day or prior to rain event.

INSPECTIONS

Qualified personnel shall inspect disturbed areas of the construction site that have not been finally stabilized at least once every seven calendar days.
- Inspect site for evidence of, or the potential of, pollutants entering the drainage system from stored materials.
- Observe erosion and sediment controls to ensure that they are operating correctly.
- Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.
- Inspect discharge locations to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
- Any modifications to the plan as a result of an inspection shall be implemented within 7 calendar days of the inspection.
- An inspection report shall be prepared and retained as part of the prevention plan until project termination, this report will contain the following:
  - A summary of the scope of the inspection.
  - Qualifications of the personnel making the inspection.
  - Major observations relating to the implementation of the prevention plan.
  - Any actions taken.
  - Signature.

NON-STORM WATER DISCHARGES

Water main flushing
- Flushed water will be discharged into the storm sewer system where, when discharged, it will undergo erosion and sediment controls consisting of:
  - Rock outlet protection (riprap)
  - Silt fencing
  - Existing vegetation

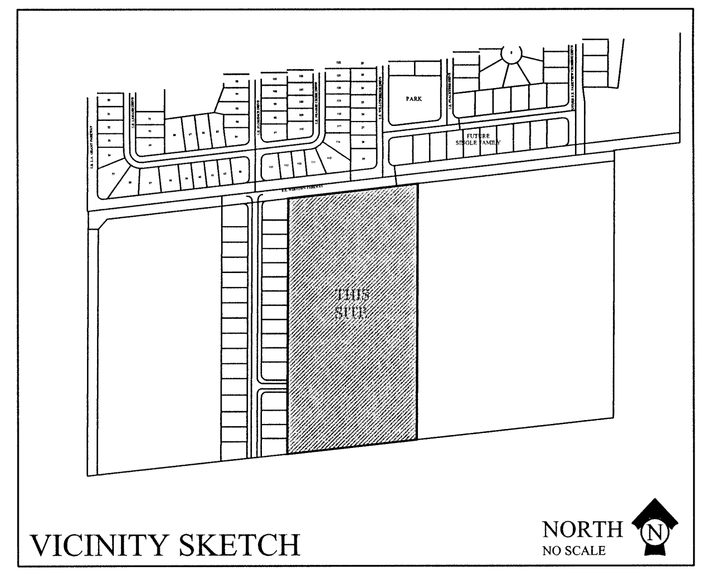
CONTRACTORS

The grading contractor shall have the responsibility of implementing the measures contained in this plan.

Start: 7/19/2013
Completion Date:
Contractor:
Grading- Seamus Excavating
Pipe- Priority Excavating
Paving- Alliance Concrete Group

EROSION & POLLUTION CONTROL NOTES

1. THE SUBCONTRACTOR RESPONSIBLE FOR EROSION AND POLLUTION CONTROL SHALL CARRY OUT THE MEASURES DETAILED ON THIS PLAN.
2. CONTROLS MUST BE IN GOOD OPERATING CONDITION UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETE AND FINAL STABILIZATION HAS BEEN REACHED.
3. THE SUBCONTRACTOR SHALL INSPECT THE SITE AT MINIMUM ONCE EVERY 7 DAYS. ALL DISTURBED AREAS OF THE SITE, AREAS OF MATERIAL STORAGE, LOCATIONS WHERE VEHICLES ENTER/EXIT THE SITE. ALL OF THE EROSION AND SEDIMENT CONTROLS THAT ARE IDENTIFIED AS PART OF THIS PLAN AND ACCESSIBLE DISCHARGE LOCATIONS MUST BE INSPECTED.
4. THE SUBCONTRACTOR IS TO TAKE NECESSARY ACTIONS TO CORRECT DEFICIENCIES FOUND DURING INSPECTIONS AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN 7 DAYS AFTER THE INSPECTION IN WHICH THE DEFICIENCY WAS FOUND.
5. THE SUBCONTRACTOR SHALL KEEP LOG AND PREPARE WEEKLY REPORTS DETAILING THE INSPECTIONS AND MEASURES TAKEN TO CORRECT ANY AND ALL DEFICIENCIES FOUND IN THE EROSION AND POLLUTION CONTROL MEASURES. THE REPORTS SHALL CONFORM TO THE STANDARDS SET BY THE IOWA DEPARTMENT OF NATURAL RESOURCES. COPIES OF THESE REPORTS SHALL BE FORWARDED TO THE DEVELOPER, THE CITY OF WAUKEE STORM WATER COORDINATOR, AND TO COOPER CRAWFORD & ASSOCIATES, L.L.C.
6. DURING CONSTRUCTION, IF IT BECOMES EVIDENT THAT A DISTURBED AREA WILL NOT BE DISTURBED FOR 21 DAYS, IT SHALL BE SEEDED BY DAY 7.
7. PERMANENT SEEDING TO BE DONE IMMEDIATELY AFTER FINAL GRADING.
8. ANY FAILED AREAS OF SEEDING/MULCHING SHALL BE REAPPLIED.
9. ANY SOIL OR SPILL WASHED, TRACKED OR DROPPED ONTO ADJOINING RIGHT-OF-WAYS AND PROPERTY WILL BE CLEANED UP BY THE OWNER/CONTRACTOR BY THE END OF THE DAY OR PRIOR TO A RAIN EVENT.
10. SILT FENCING TO BE INSPECTED ONCE A WEEK AND AFTER EACH RAINSTORM, LOOK FOR UNDERCUTTING AND FAILURES IN FABRIC. REPLACE/REPAIR AS NECESSARY.
11. ADDITIONAL SILT FENCING (TO THAT SHOWN ON THIS PLAN) MAY BE REQUIRED IN AREAS WHERE EROSION IS EVIDENT.
12. SILT FENCING TO BE CLEANED UP WHEN THEY HAVE LOST 50% OF THEIR CAPACITY.
13. ALL INTAKES SHALL HAVE SILT FENCING PRIOR TO PAVING AND INLET FILTERS AFTER PAVING. BELOW GRADE INLET PROTECTION REQUIRED FOR ALL PUBLIC STREETS. THESE FILTERS REMAIN IN PLACE UNTIL THE SITE HAS A PERMANENT PERENNIAL GROUND COVER.
14. ALL INTAKES SHALL BE COVERED DURING CONSTRUCTION TO PREVENT SEDIMENTATION DEPOSITS WITHIN THE STORM SEWER.
15. IN THE EVENT THAT SEEDING/MULCHING DOES NOT OCCUR PRIOR TO WINTER, ALL DISTURBED AREAS WILL BE MULCHED.
16. TEMPORARY SEDIMENT BASIN LOCATED IN LOT 16 SHALL REMAIN IN PLACE UNTIL THE ENTIRE SITE HAS SUBSTANTIAL STABILIZATION OF ALL DISTURBED AREAS, OR AS DIRECTED BY THE CITY OF WAUKEE.
17. ALL PERIMETER EROSION CONTROLS/SILT FENCE SHALL REMAIN IN PLACE, AND BE MAINTAINED, UNTIL UPSTREAM AREAS ARE STABILIZED.
18. CONTRACTOR SHALL PROVIDE FILTER FABRIC AROUND INTAKE GRATES, OR A SIMILAR EROSION CONTROL PRACTICE AFTER PAVING OPERATIONS.
19. SEDIMENT SHOULD BE REMOVED FROM THE TEMPORARY SEDIMENT BASIN WHEN SEDIMENT ACCUMULATES TO ONE HALF OF THE WET STORAGE VOLUME.
20. TRASH SHOULD BE REMOVED FROM THE BASIN, AND THE RISER PIPE SHOULD BE CLEARED OF DEBRIS AS NEEDED PER WEEKLY INSPECTIONS.



VICINITY SKETCH

GRADING NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.
2. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL PUBLIC AND/OR PRIVATE UTILITIES SERVING THE AREA TO DETERMINE THE PRESENT EXTENT AND EXACT LOCATION OF THEIR FACILITIES BEFORE BEGINNING WORK.
3. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON BREAKING OR DAMAGE TO ANY UTILITY LINE OR APPURTENANCE, OR THE INTERRUPTION OF THEIR SERVICE. HE SHALL NOTIFY THE PROPER UTILITY INVOLVED. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
4. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
5. STOCKPILE SUFFICIENT TOPSOIL RESPREAD A MINIMUM OF 4-INCHES ON UNPAVED AREAS.
6. ALL AREAS TO RECEIVE FILL TO BE BENCHED.
7. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
8. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR.
9. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE BETWEEN 0-4%
10. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
11. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
12. A MINIMUM OF ONE FOOT OF COMPACTED COHESIVE SUBGRADE SHALL BE PROVIDED BENEATH ALL PAVEMENTS.
13. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF WAUKEE STANDARD SPECIFICATIONS AND THE 2012 STATEWIDE URBAN DESIGN AND SPECIFICATIONS.
14. EXISTING TREES WILL BE SAVED TO THE EXTENT POSSIBLE TO ACCOMMODATE GRADING, UTILITY AND STREET CONSTRUCTION.
15. ALL WORK WITHIN PUBLIC R.O.W., CONNECTION TO PUBLIC IMPROVEMENTS, AND ALL WORK ASSOCIATED WITH PUBLIC IMPROVEMENTS SHALL COMPLY WITH WAUKEE STANDARD SPECIFICATIONS INCLUDING ALL APPLICABLE PERMITS AND THE 2012 STATEWIDE URBAN DESIGN AND SPECIFICATIONS.

NOTES

1. ONE WEEK PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY:
   A. WAUKEE ENGINEERING DEPARTMENT
   B. ARAC, L.L.C.
   C. COOPER CRAWFORD & ASSOCIATES, L.L.C.
   D. IOWA ONE-CALL
2. THE CONTRACTOR SHALL CONTACT ONE CALL TO VERIFY THE LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. ALL TRENCH BACKFILL SHALL BE 95% STANDARD PROCTOR DENSITY. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE BETWEEN 0-4%.
4. THE CONTRACTOR SHALL RECONNECT ALL FIELD TILE INTERCEPTED DURING CONSTRUCTION AND AS BUILT LOCATIONS TO BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
5. STRIP TOP SOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
6. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
7. FINAL GRADES WITHIN THE STREET RIGHT-OF-WAY AND ALL DRAINAGE AREAS SHALL BE WITHIN .1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN .2' OF PLAN GRADE.
8. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL SILT FENCES.
9. ALL AREAS WHICH ARE DISTURBED SHALL BE SEEDED WITH SUDAS EROSION CONTROL MIX, FERTILIZED, AND MULCHED. SEEDING OF OUTLOT 'Y' AND ALL LANDSCAPE BUFFER EASEMENTS SHALL USE SUDAS TYPE 1 (PERMANENT LAWN MIXTURE).
10. INSTALL SILT FENCES AS SHOWN.
11. ADDITIONAL SILT FENCES OR OTHER SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED IF EROSION EXISTS.
12. THE ENGINEER SHALL BE RESPONSIBLE FOR PROVIDING THE CITY OF WAUKEE WITH THE UTILITY LOCATION.
13. THE CONTRACTOR SHALL MARK UTILITY SERVICES ENDS WITH A 6' STEEL POST.
14. PAINT SERVICE LOCATIONS ON CURB: SANITARY - RED, STORM - GREEN, WATER - BLUE
15. THE CONTRACTOR SHALL VERIFY THE UTILITY LOCATES.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL SERVICES. PROVIDE A COPY TO THE CITY OF WAUKEE.
17. ALL SANITARY SEWER SERVICES AND 8-INCH STUB-OUTS SHALL BE CAPPED.
18. PROVIDE SANITARY SEWER SERVICE RISER AS REQUIRED BY THE CITY OF WAUKEE.
19. PLUMBING CONTRACTOR SHALL VERIFY SERVICE STUB-OUT ELEVATIONS ON LOTS PRIOR TO HOUSE CONSTRUCTION TO ENSURE BASEMENT FLOOR ELEVATIONS WILL PROVIDE ADEQUATE FALL IN SERVICE PIPE (2% MINIMUM SLOPE).
20. ALL FIRE HYDRANTS SHALL BE 3' FROM WATER MAIN EXCEPT WHERE CONFLICTS WITH SIDEWALKS OCCUR.
21. CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION THAT FIRE HYDRANTS WILL HAVE 24-INCH CLEARANCE FROM THE HYDRANT TO THE SIDEWALK.
22. HYDRANTS, MANHOLE COVERS, AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
23. WATER MAIN TO HAVE 6' BURY TYPICAL EXCEPT AT CRITICAL CROSSINGS.
24. ALL INTAKES SHALL HAVE TYPE 'V' CASTINGS.
25. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE AT TOP OF CURB UNLESS OTHERWISE NOTED.
26. ALL REINFORCED STEEL SHALL BE EPOXY COATED.
27. SUBGRADE TO BE 12-INCH THICK EARTH COMPACTED TO 95% MAX. DENSITY WITH MOISTURE CONTENT BETWEEN 0-4%.
28. USE I.D.O.T. C-4 MIX ON ALL STREETS.
29. DURING SUBGRADE PREPARATION, IN FILL AREAS, GRADE SHALL BE PROOF-ROLLED PRIOR TO PLACEMENT OF ONE FOOT SUB-GRADE AND COMPACTION. NOTIFY SOILS ENGINEER TO PROVIDE ON-SITE INSPECTION OF PROCESS.
30. STORM SEWER AND SANITARY SEWER SHALL BE CLEANED AND VIDEO TESTED.
31. ALL DISTURBED AREAS WITHIN EXISTING STREET RIGHT-OF-WAY OR ON PRIVATE PROPERTY SHOULD BE SODDED.
32. THE CITY OF WAUKEE SHALL BE NOTIFIED 48 HOURS PRIOR TO WATERMAIN SHUTDOWN.
33. ALL DISTURBED PROPERTY PINS AND SECTION CORNERS TO BE RESET BY A LICENSED LAND SURVEYOR.
34. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A LIST OF CONSTRUCTION MATERIALS TO THE WAUKEE PUBLIC WORKS DEPARTMENT PRIOR TO THE START OF CONSTRUCTION.
35. ALL ESTABLISHED LAWNS THAT ARE DISTURBED WILL BE SODDED.
36. ALL HYDRANTS TO BE INSTALLED WITH STORZ CONNECTION AND A STORZ FITTING ON ANY RELOCATED HYDRANTS.
37. IT IS THE ENGINEERS RESPONSIBILITY TO INCLUDE MINIMUM OPENING ELEVATIONS ON THE AS-BUILT DRAWINGS FOR THE PLAT.
38. CONSTRUCTION STAKING TO BE DONE BY A LICENSED ENGINEER OR LAND SURVEYOR.
39. ANY CHANGES PROPOSED TO THE PLAN SET DURING CONSTRUCTION TO RECEIVE WRITTEN APPROVAL FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT RECEIVED WRITTEN PERMISSION FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
40. THE CITY OF WAUKEE ENGINEERING DEPARTMENT TO BE NOTIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO ANY WEEKEND OR HOLIDAY WORK BEING SCHEDULED.
41. GENERAL PERMIT #2 HOLDER TO PROVIDE A WRITTEN CERTIFICATION STATEMENT IDENTIFYING SATISFACTION OF 4 INCH TOPSOIL REQUIREMENT.

SHEET INDEX

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2	GRADING AND EROSION AND SEDIMENT CONTROL PLAN
3-5	SANITARY SEWER
6	WATER PLAN
7-9	STORM SEWER
10-12	PAVING
13	DETAILS

OWNER
ARAC, LLC
604 LOCUST ST, STE 800
DES MOINES, IA 50266
PH. 515-988-5878

DEVELOPER
ARAC, LLC
604 LOCUST ST, STE 800
DES MOINES, IA 50266
PH. 515-988-5878

QUANTITIES

SANITARY SEWER

2,697 L.F.	8-INCH SANITARY SEWER PVC TRUSS PIPE
10 EA.	TYPE 'SW-301' MANHOLE
52 EA.	SERVICES
	*SANITARY SEWER VIDEO TESTING

WATER

2,920 L.F.	8-INCH C900 WATERMAIN
9 EA.	HYD., TEE, & 6-INCH VAVLE
10 EA.	8-INCH VALVE
3 EA.	8"x8"x8" TEE
2 EA.	45° BEND
3 EA.	22 1/2° BEND
1 EA.	TAPPING TEE AND VALVE
52 EA.	SERVICES

STORM SEWER

706 L.F.	8-FOOTING DRAIN
1,859 L.F.	15-INCH RCP CLASS III
191 L.F.	18-INCH RCP CLASS III
841 L.F.	24-INCH RCP CLASS III
50 L.F.	24-CMP
201 L.F.	27-INCH RCP CLASS III
6 EA.	TYPE 'SW-501' INTAKE
6 EA.	TYPE 'SW-503' INTAKE
10 EA.	TYPE 'SW-401' MANHOLE
1 EA.	TYPE 'SW-512' 18" INTAKE
4 EA.	TYPE 'SW-512' 24" INTAKE
1 EA.	27-INCH F.E.S.
1 EA.	15-INCH F.E.S.
1 EA.	24-INCH CMP F.E.S.
1 EA.	24-INCH STANDPIPE
1435 L.F.	6-INCH SUBDRAIN
9 EA.	SUBDRAIN CLEANOUT
40 TONS	CLASS 'D' RIP-RAP OR TURF REINFORCEMENT MAT
52 EA.	SERVICES
	*STORM SEWER VIDEO TESTING

PAVING

9,140 S.Y.	7-INCH NON-REINFORCED P.C.C.
13,710 S.Y.	SUBGRADE PREP
140 L.F.	10' PUBLIC TRAIL ALONG WESTOWN PARKWAY
325 L.F.	5' PUBLIC SIDEWALK ADJACENT TO OUTLOT 'Y'
9 S.Y.	MAILBOX PADS AND WALKS

OTHER

4,913 L.F.	SILT FENCE OR APPROVED FILTER SOCK
26.74 AC.	SEEDING AND MULCHING

LEGEND

EXISTING/PROPOSED

	PLAT BOUNDARY
--------SAN 8"	SANITARY SEWER & SIZE
-------- ST 18"	STORM SEWER & SIZE
-------- W 8"	WATER MAIN & SIZE
	SANITARY SERVICE 4"
	STORM SERVICE 1 1/2"
	WATER SERVICE 1"
	MANHOLE
	STORM INTAKE
	FIRE HYDRANT
	VALVE
	FLARED END SECTION

CERTIFICATION

LICENSED PROFESSIONAL ENGINEER
BRADLEY R. COOPER
12980
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

2-6-14

BRADLEY R. COOPER, IOWA LICENSE NO. 12980
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2013

PAGES OR SHEETS COVERED BY THIS SEAL:
(SHEETS 1-13)

COOPER CRAWFORD
& ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th STREET, SUITE 800, WEST DES MOINES, IOWA 50265
PHONE: (515) 224-1344 FAX: (515) 224-1345

DATE: 4-18-2013
REVISIONS: 5-7-2013
5-16-2013
7-18-2013
AS-BUILTS: 12-16-2013

JOB NUMBER
CC 1485

COVER SHEET
WESTOWN MEADOWS PLAT 2

APPROVED FOR CONSTRUCTION BY CITY OF WAUKEE: 5-21-2013

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NOTES

1. IT IS THE APPLICANTS RESPONSIBILITY TO PROVIDE THE CITY OF WAUKEE WITH A CERTIFIED GRADING PLAN PRIOR TO THE ACCEPTANCE OF SUBDIVISION IMPROVEMENTS.

LEGEND

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- ST 18" — STORM SEWER & SIZE
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- FIRE HYDRANT
- VALVE
- F.E.S.
- 990 — EXISTING CONTOURS
- 990 — PROPOSED CONTOURS
- SILT FENCE OR APPROVED FILTRATION SOCK
- LIGHT POLE
- 000.00 — DESIGNED SPOT ELEVATION

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N — 0 30 60 — SCALE: 1"=60'

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APPROVED: 5-21-2013 INITIALED: BRC AS-BUILT:

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GRADING & EROSION & SEDIMENT CONTROL PLAN
WESTOWN MEADOWS PLAT 2

SHEET 2 OF 13

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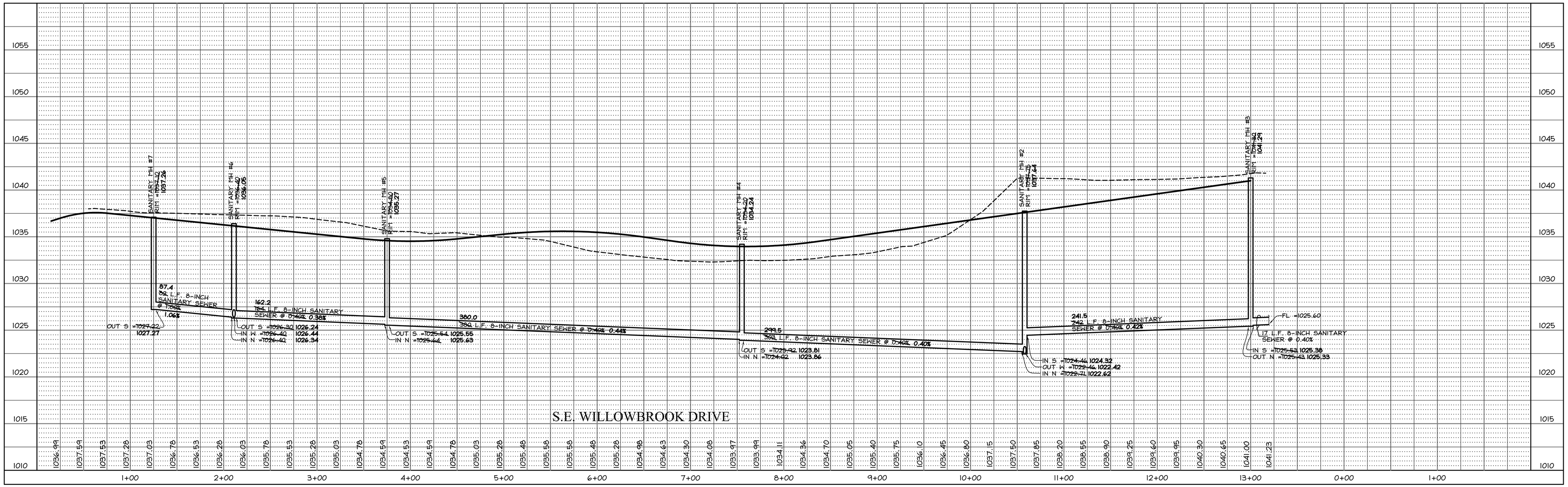

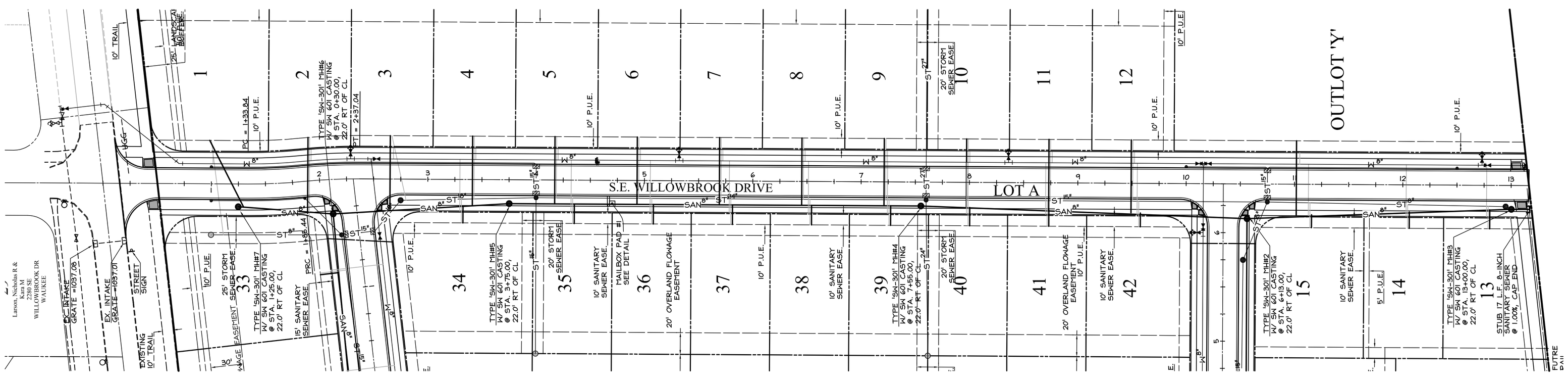

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SCALE: 1"=50'

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SANITARY SEWER
WESTOWN MEADOWS PLAT 2

SHEET 3 OF 13

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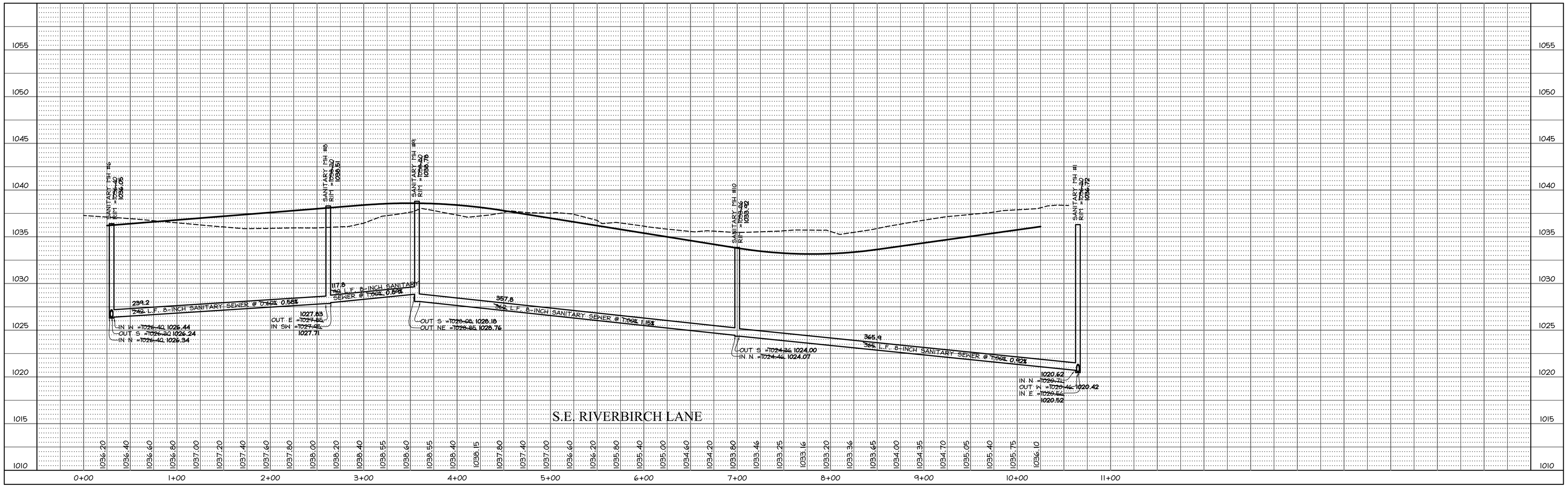

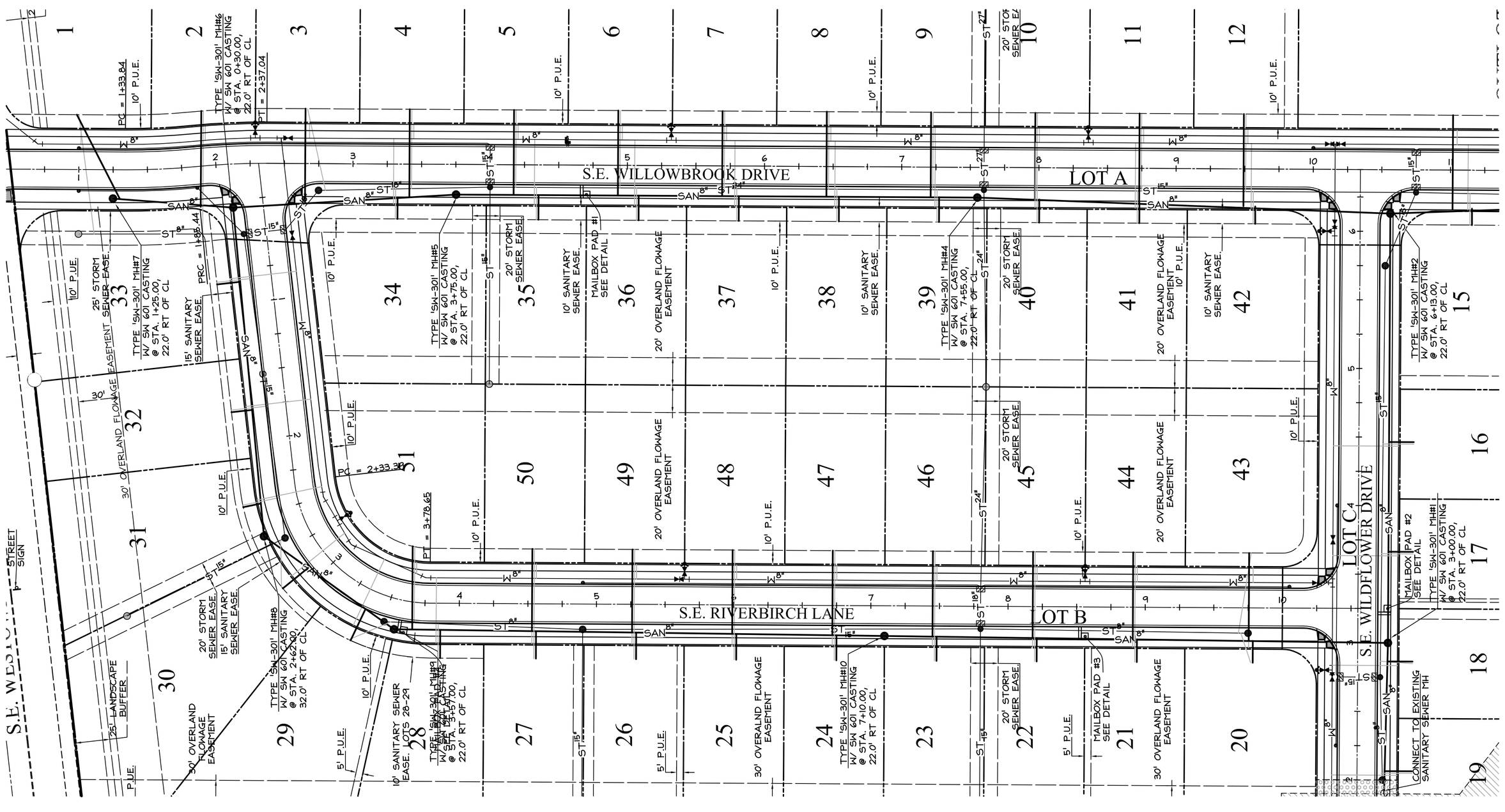

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SANITARY SEWER
WESTOWN MEADOWS PLAT 2

SHEET 4 OF 13

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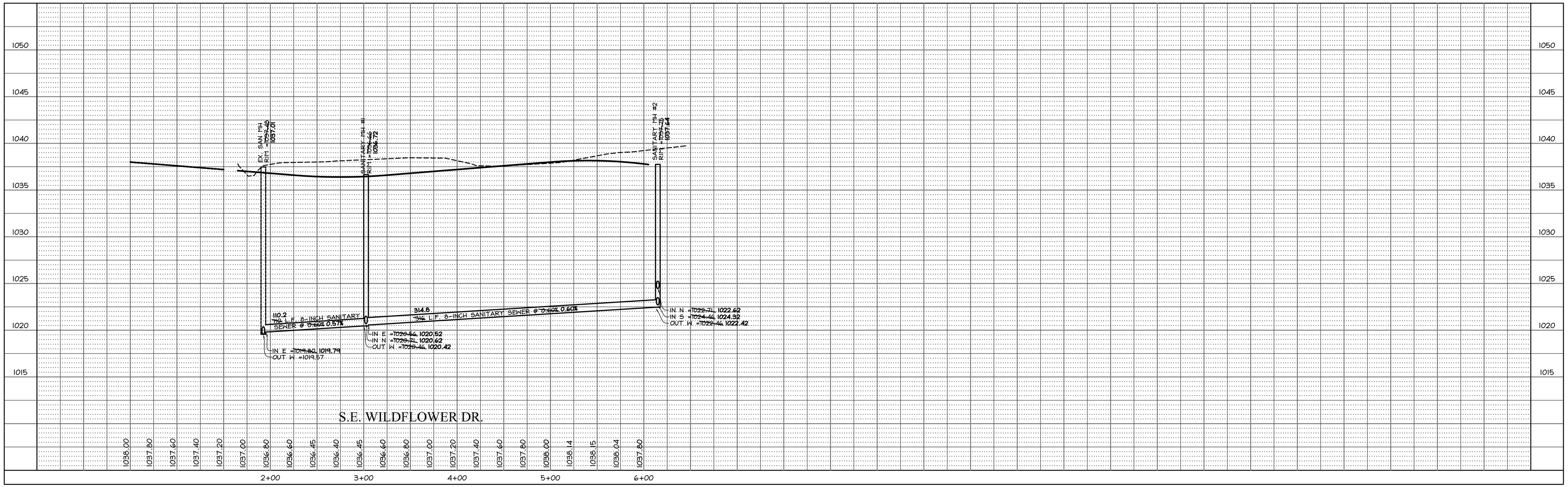

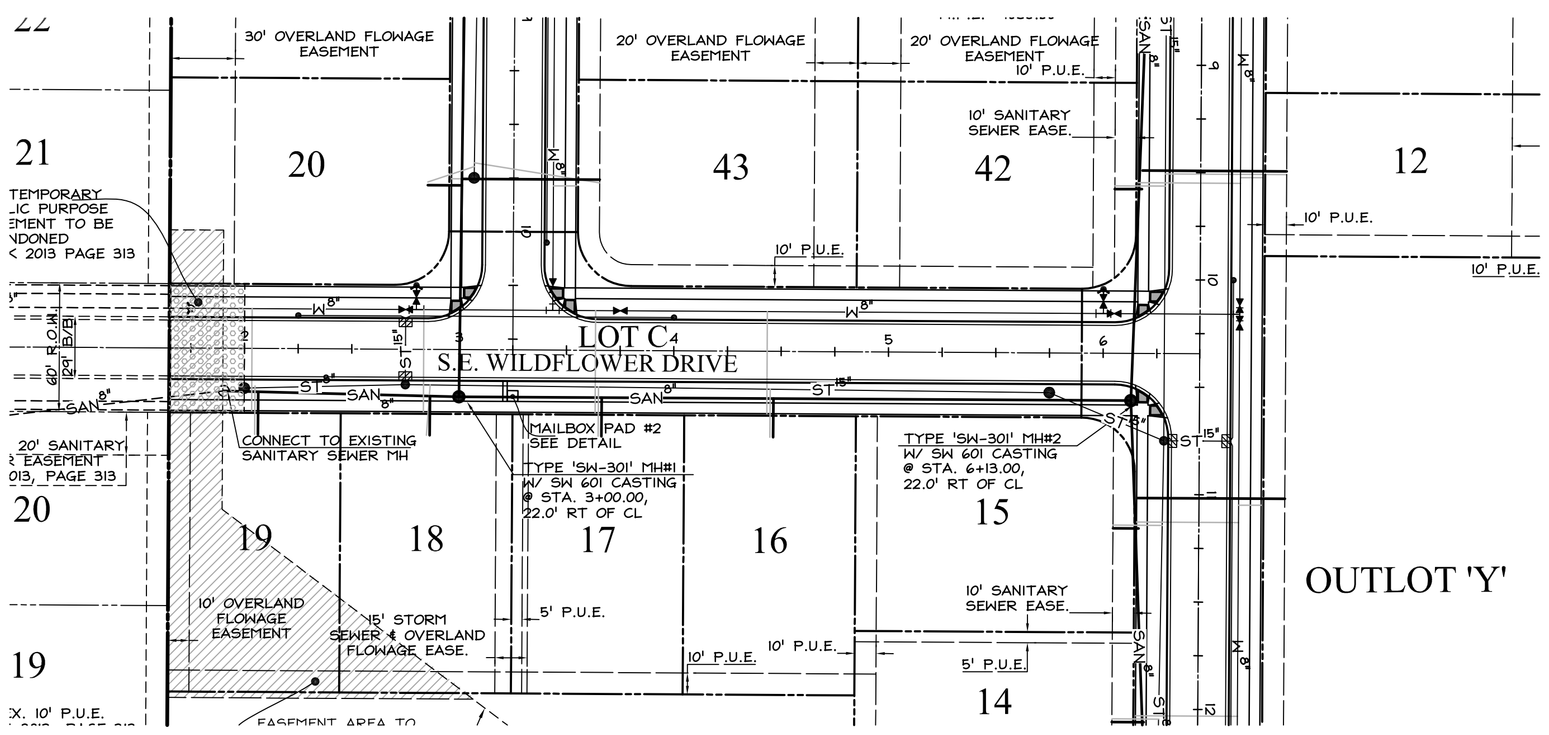

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PHONE: (515) 224-1344 FAX: (515) 224-1345

DATE: 4-18-2013
REVISIONS: 5-7-2013
5-16-2013

N

0 25 50
SCALE: 1"=50'

AS-BUILT: 12-16-2013

JOB NUMBER
CC 1485

SANITARY SEWER
WESTOWN MEADOWS PLAT 2

SHEET
5 OF 13

APPROVED FOR CONSTRUCTION BY CITY OF WAUKEE: 5-21-2013

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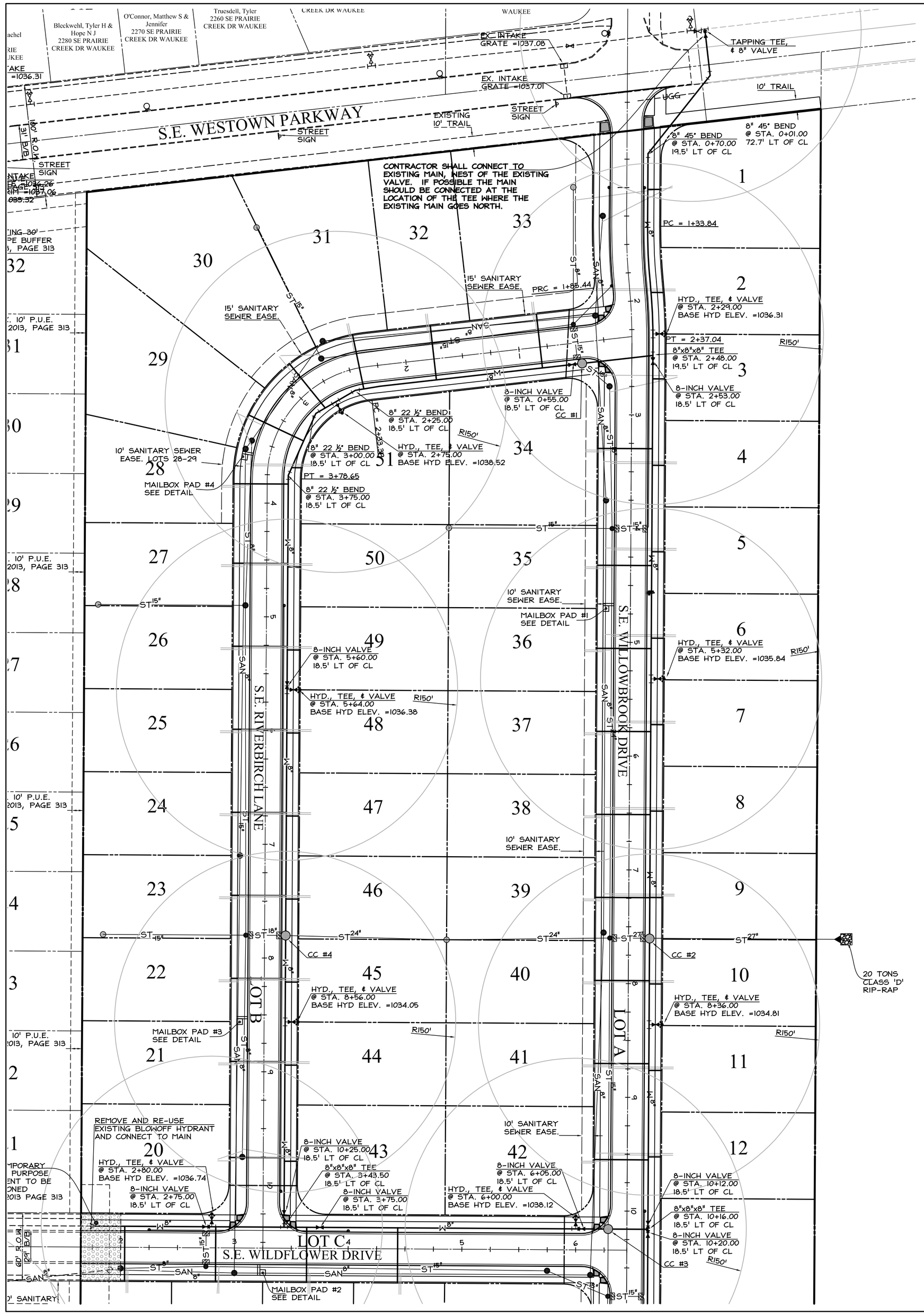

LEGEND

EXISTING/PROPOSED

- PLAT BOUNDARY
- STORM SEWER & SIZE
- SANITARY SEWER & SIZE
- WATER MAIN & SIZE
- MANHOLE
- STORM INTAKE
- FIRE HYDRANT
- VALVE
- F.E.S.
- EXISTING CONTOURS
- PROPOSED CONTOURS
- SILT FENCE OR APPROVED FILTRATION SOCK
- LIGHT POLE
- DESIGNED SPOT ELEVATION

CRITICAL CROSSINGS

CC #1 BOTTOM OF STORM =1030.18
TOP OF MAIN =1028.65
MAINTAIN 1.5' VERTICAL CLEARANCE & 6' MIN. BURY

CC #2 BOTTOM OF STORM =1027.71
TOP OF MAIN =1026.20
MAINTAIN 1.5' VERTICAL CLEARANCE & 6' MIN. BURY

CC #3 BOTTOM OF STORM =1030.05
TOP OF MAIN =1028.40
MAINTAIN 1.5' VERTICAL CLEARANCE & 6' MIN. BURY

CC #4 BOTTOM OF STORM =1028.61
TOP OF MAIN =1027.11
MAINTAIN 1.5' VERTICAL CLEARANCE & 6' MIN. BURY

IOWA ONE-CALL
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TOLL-FREE
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0 25 50
SCALE: 1"=50'

APPROVED: 5-21-2013 INITIALED: BRC AS-BUILT:

JOB NUMBER
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WATER PLAN
WESTOWN MEADOWS PLAT 2

SHEET
6 OF 13

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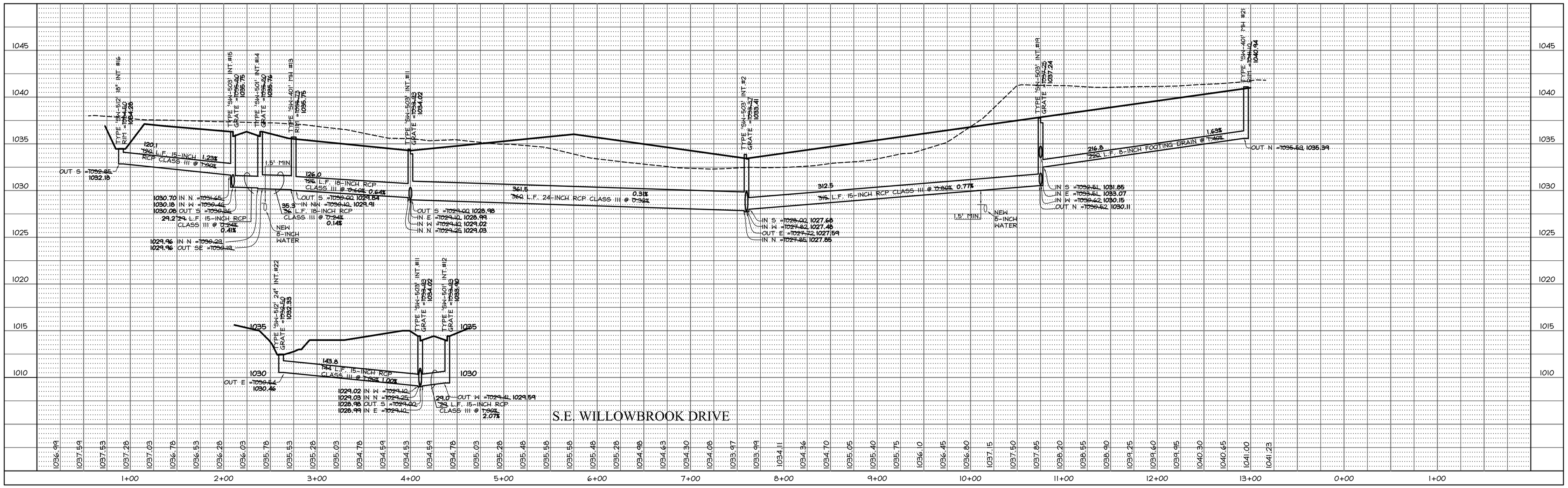

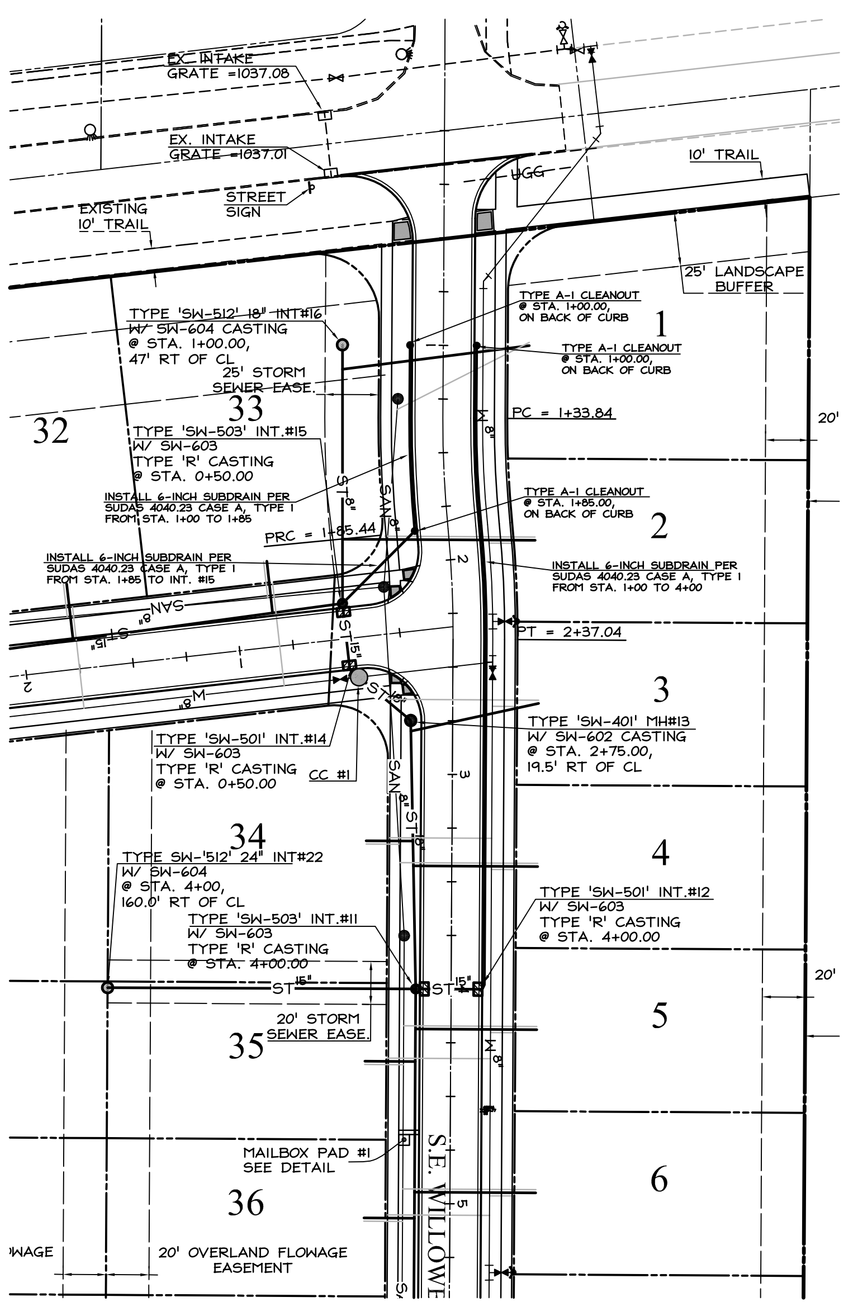

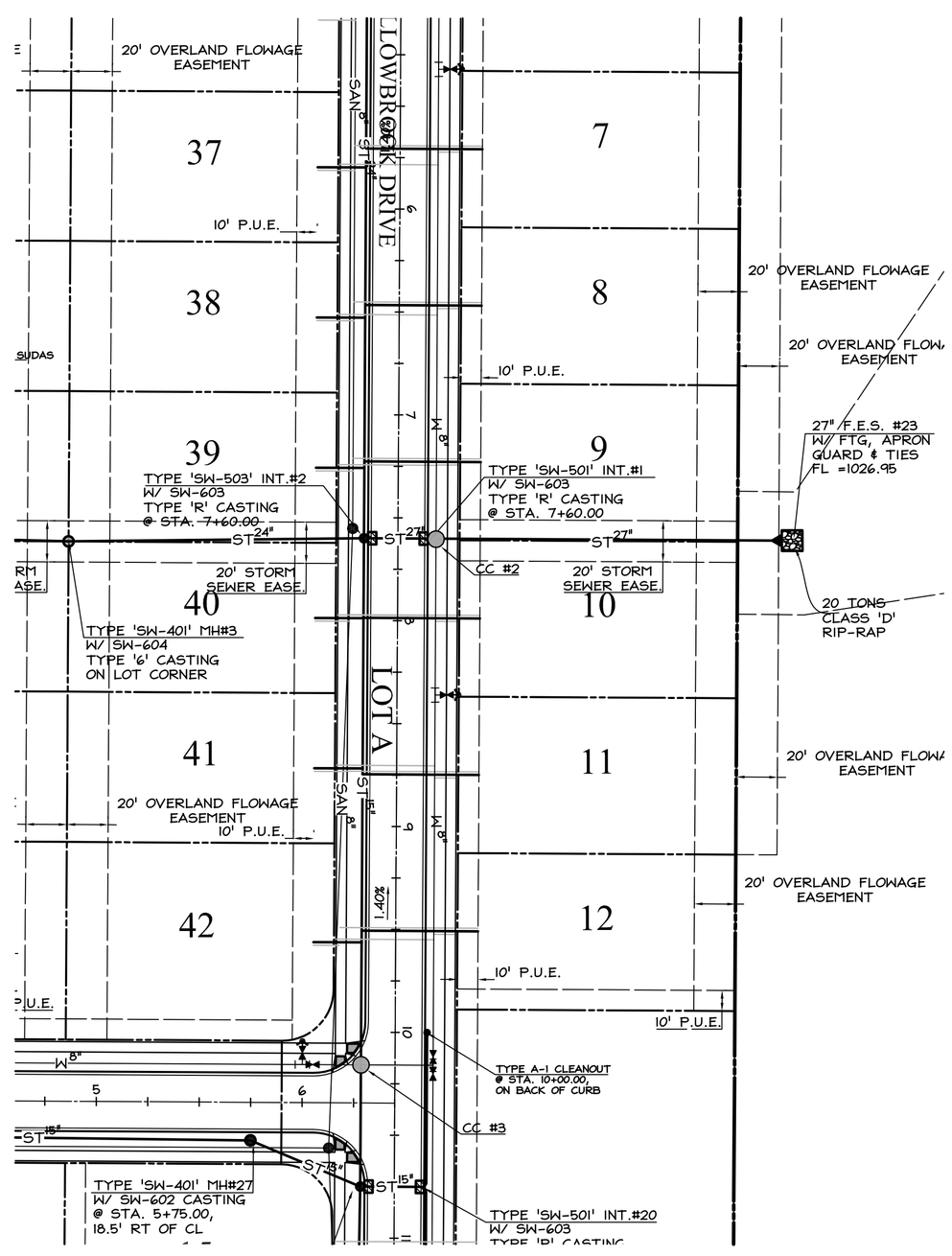

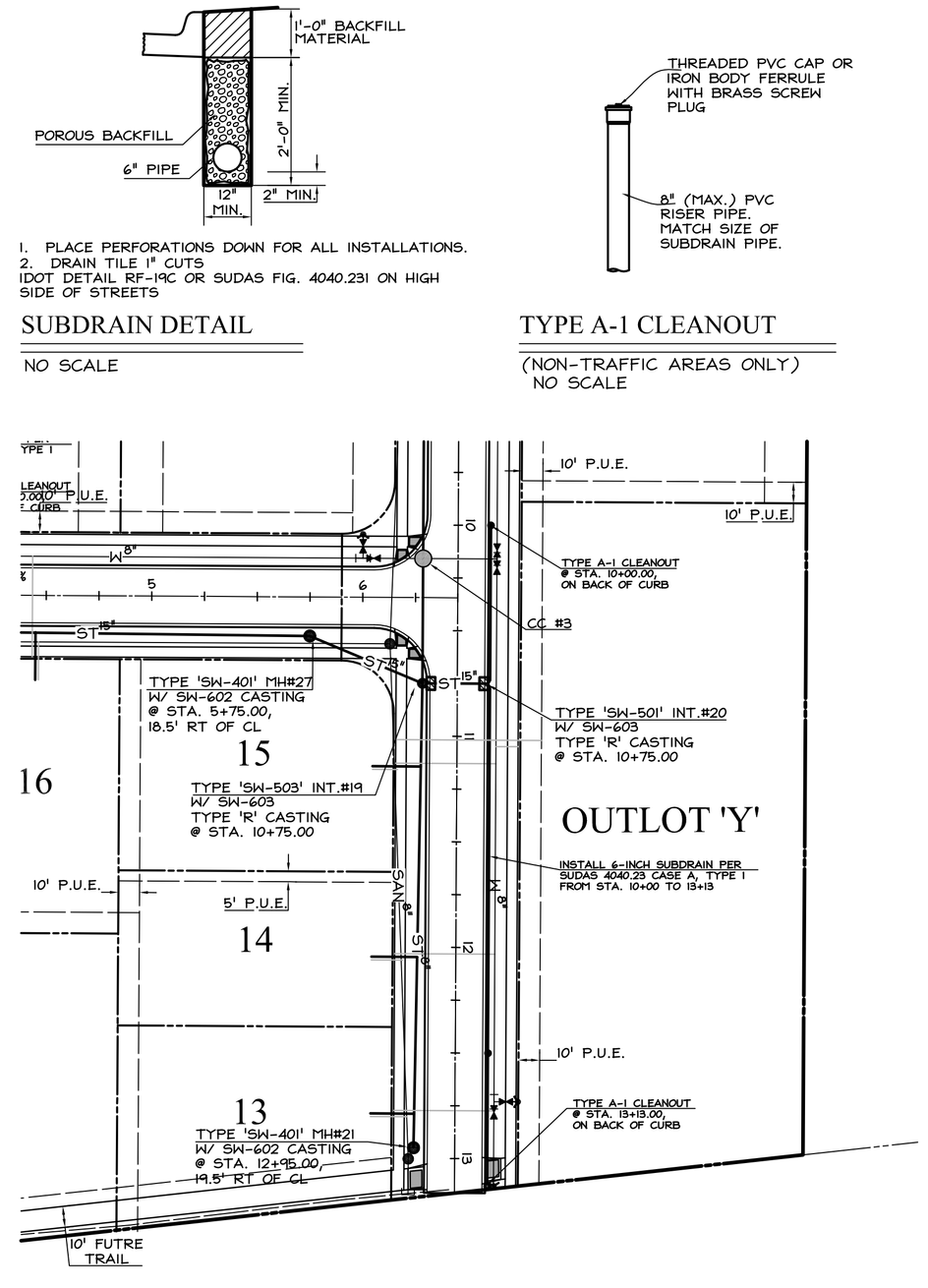

1. PLACE PERFORATIONS DOWN FOR ALL INSTALLATIONS.
2. DRAIN TILE 1" CUTS

IDOT DETAIL RF-19C OR SUDAS FIG. 4040.231 ON HIGH SIDE OF STREETS

SUBDRAIN DETAIL

NO SCALE

TYPE A-1 CLEANOUT

(NON-TRAFFIC AREAS ONLY)
NO SCALE

NOTE

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- VALVE
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STORM SEWER
WESTOWN MEADOWS PLAT 2

SHEET 7 OF 13

APPROVED FOR CONSTRUCTION BY CITY OF WAUKEE: 5-21-2013

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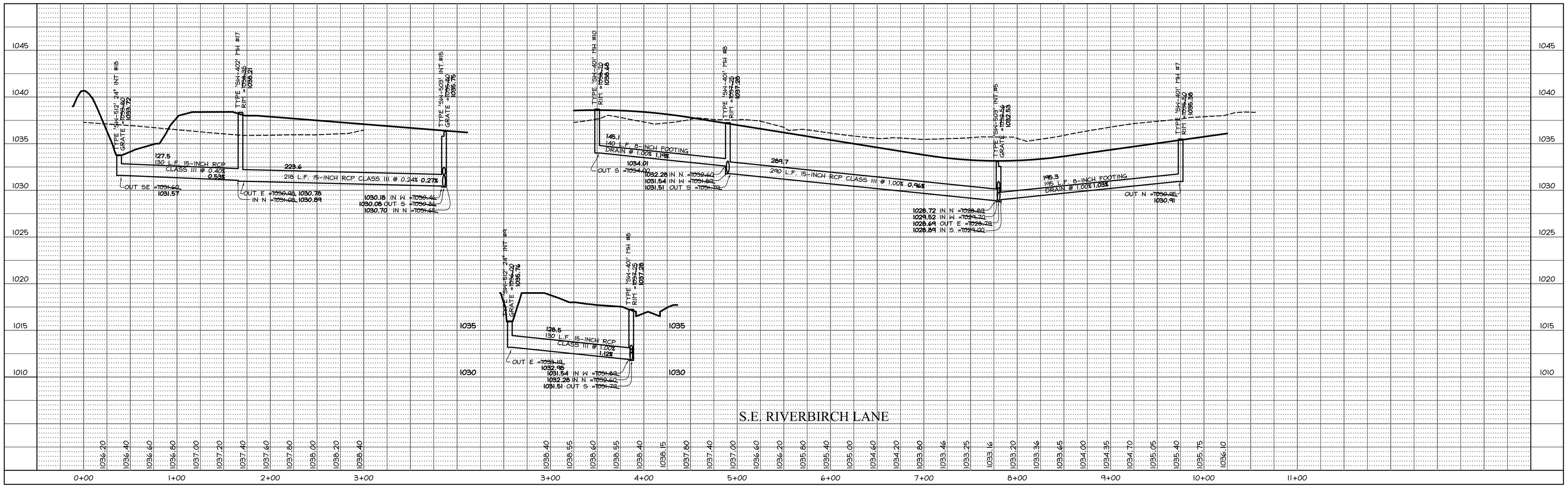

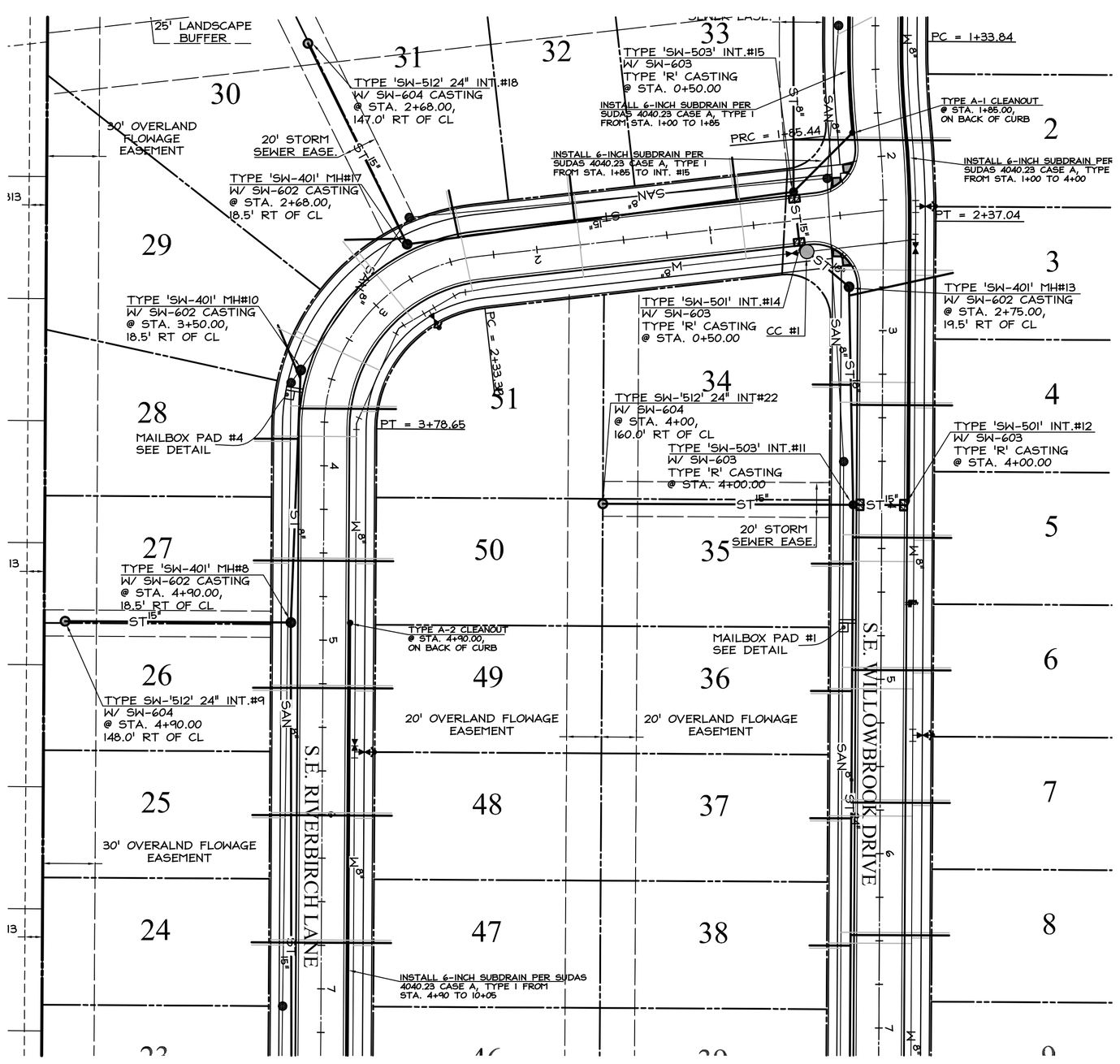

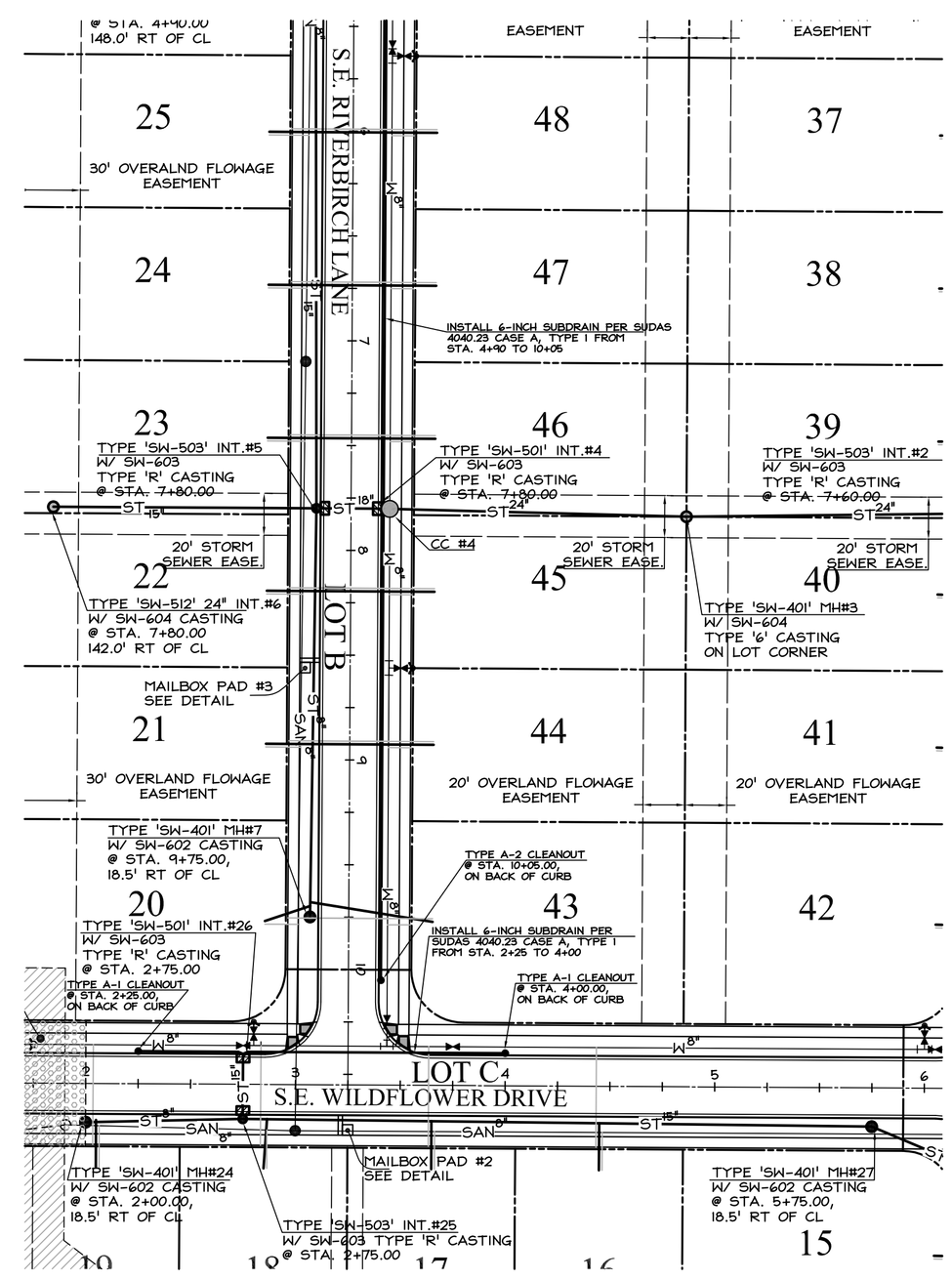

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STORM SEWER
WESTOWN MEADOWS PLAT 2

SHEET
8 OF 13

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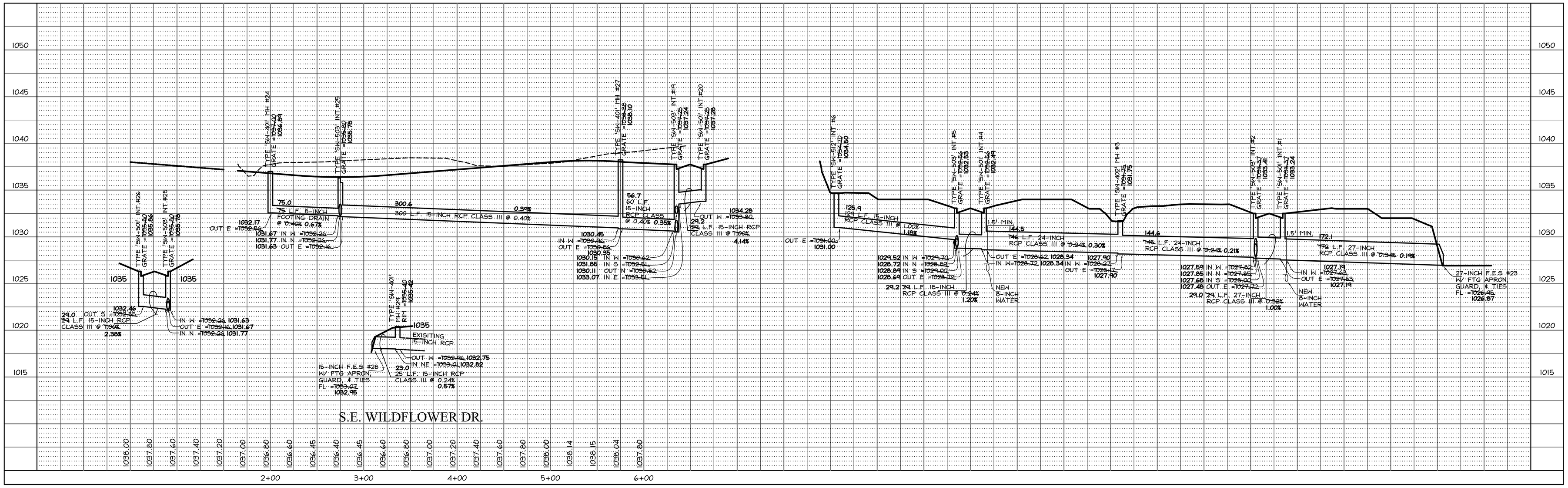

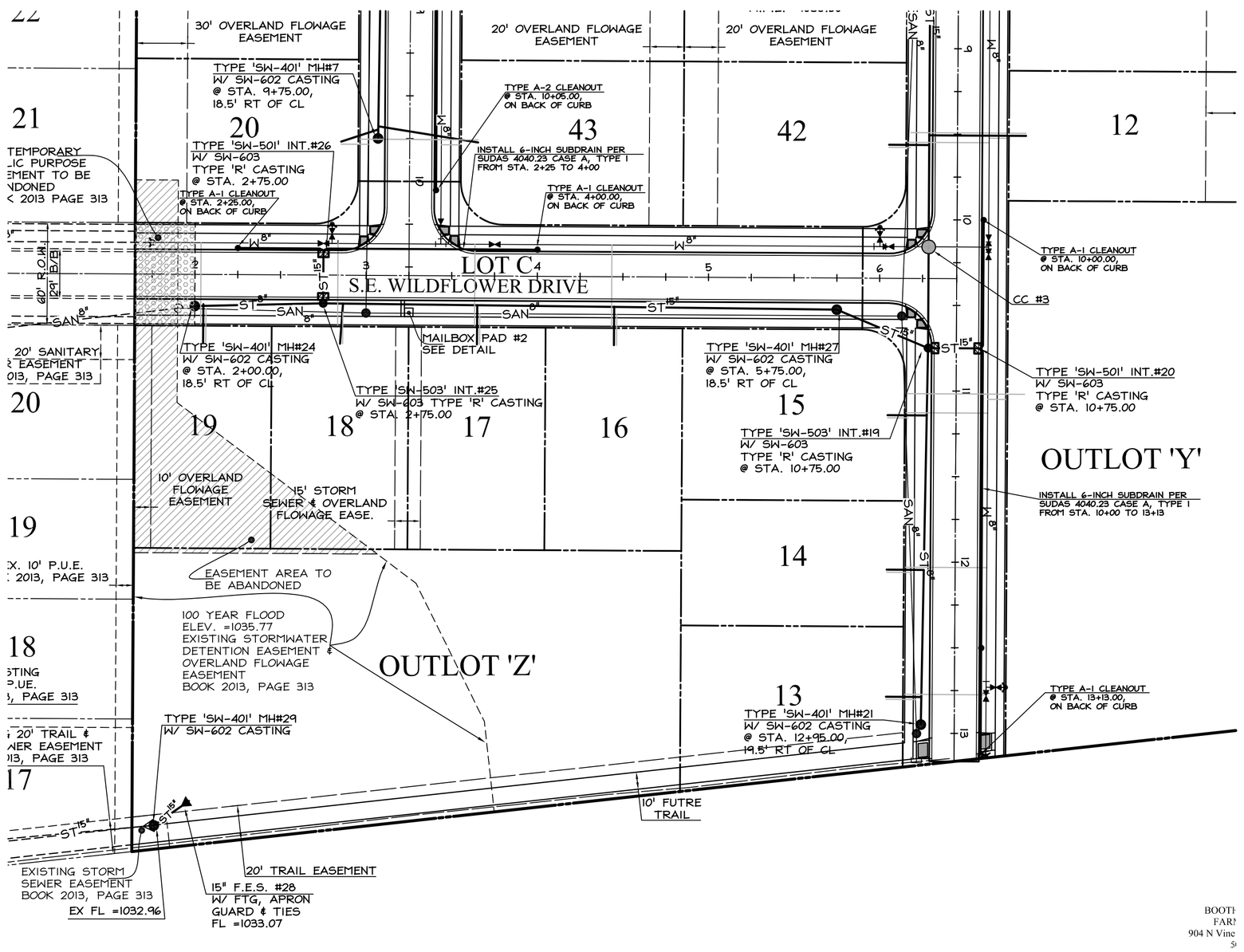

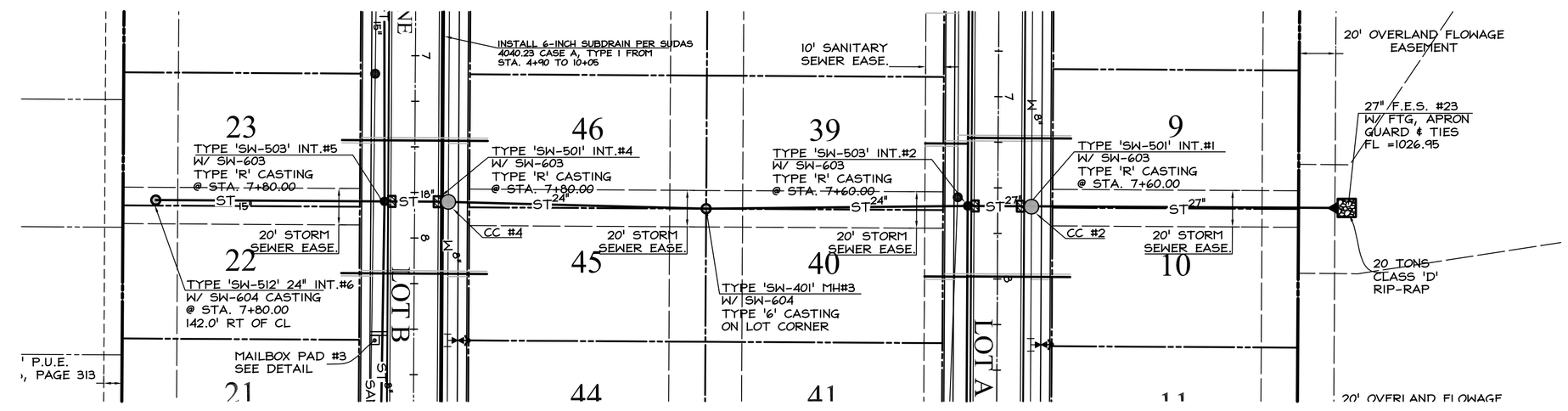

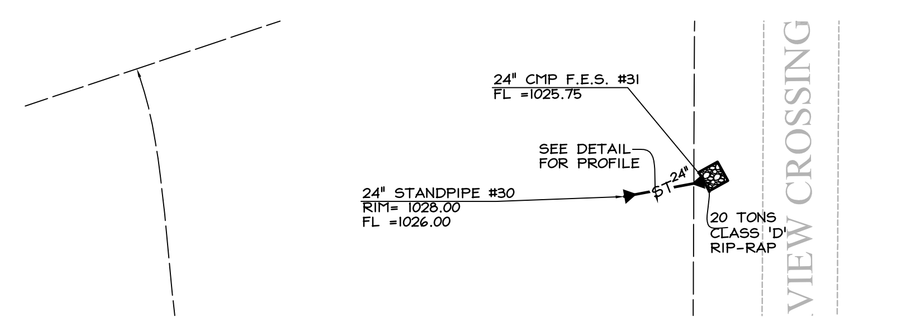

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SCALE: 1"=50' (0 25 50)

AS-BUILT: 12-16-2013

JOB NUMBER CC 1485

STORM SEWER
WESTOWN MEADOWS PLAT 2

SHEET 9 OF 13

APPROVED FOR CONSTRUCTION BY CITY OF WAUKEE: 5-21-2013

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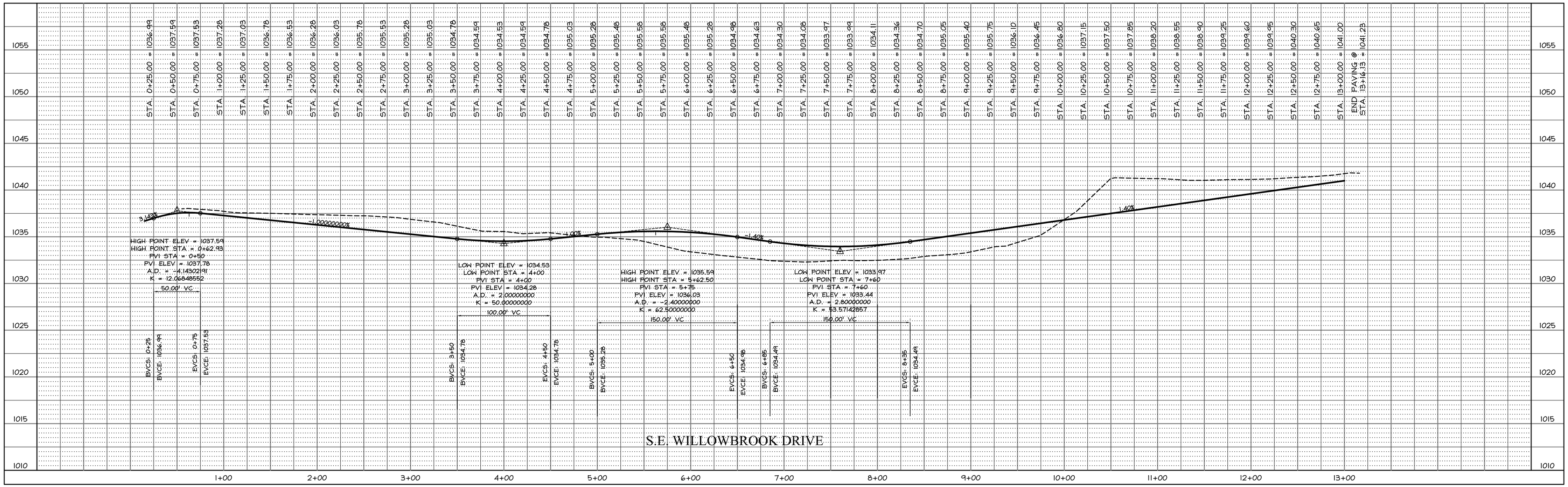

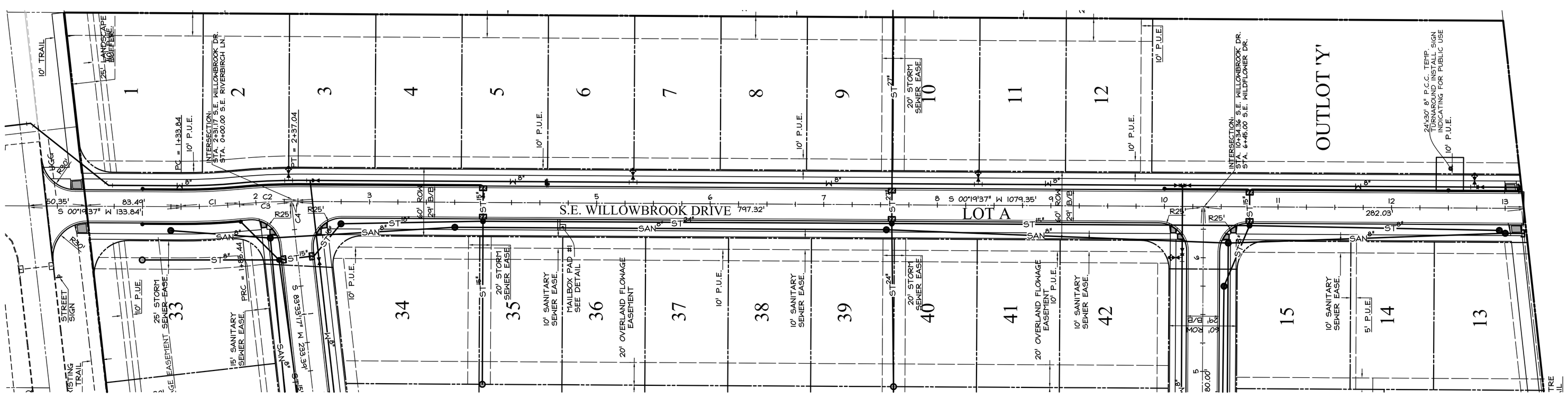

STREETS ARE 29' WIDE WITH 7-INCH NON-REINFORCED CONCRETE PAVEMENT.

NOTES

1. THE 10' TRAIL ADJACENT TO LOT 1 AND THE 5' SIDEWALK ADJACENT TO OUTLOT 'Y' WILL BE INSTALLED SHALL BE INSTALLED AS PART OF THE PUBLIC IMPROVEMENTS.

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CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD	CH.BEARING
C1	5°54'45"	500.00	51.60	25.82	51.57	S02°37'46"E
C2	5°54'45"	500.00	51.60	25.82	51.57	N02°37'46"W
C3	5°14'24"	500.00	45.73	22.88	45.71	N02°57'56"W
C4	0°40'21"	500.00	5.87	2.93	5.87	N00°00'34"W
C5	83°13'27"	100.00	145.25	88.82	132.82	S41°56'20"W

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SCALE: 1"=50'

AS-BUILT:

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PAVING
WESTOWN MEADOWS PLAT 2

SHEET 10 OF 13

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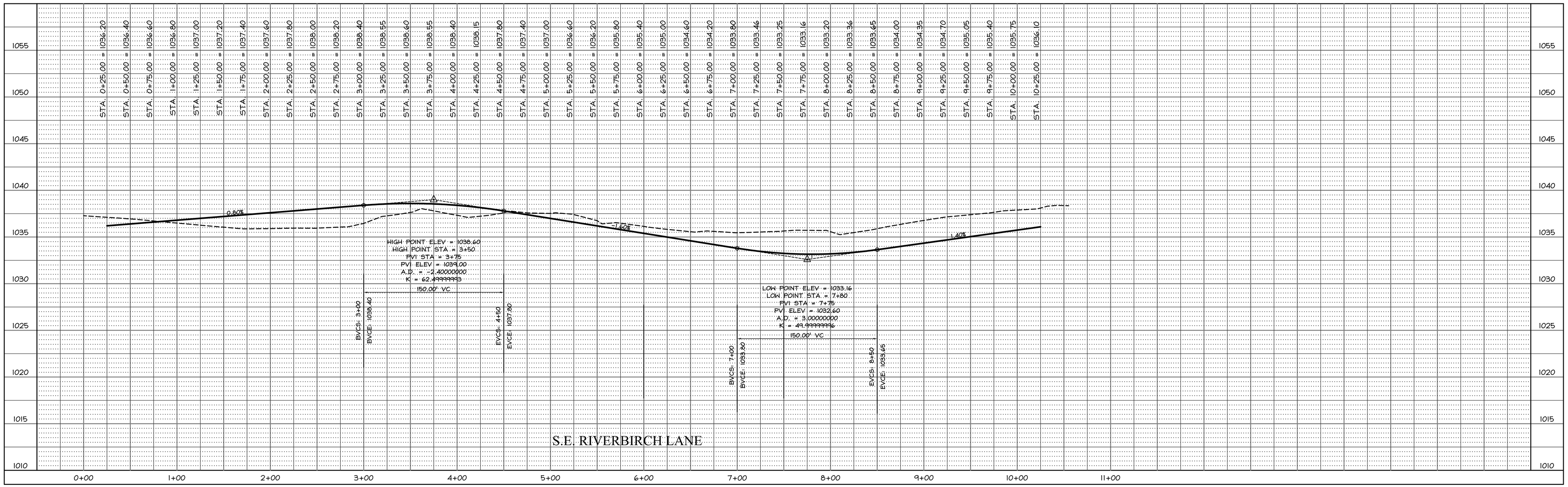

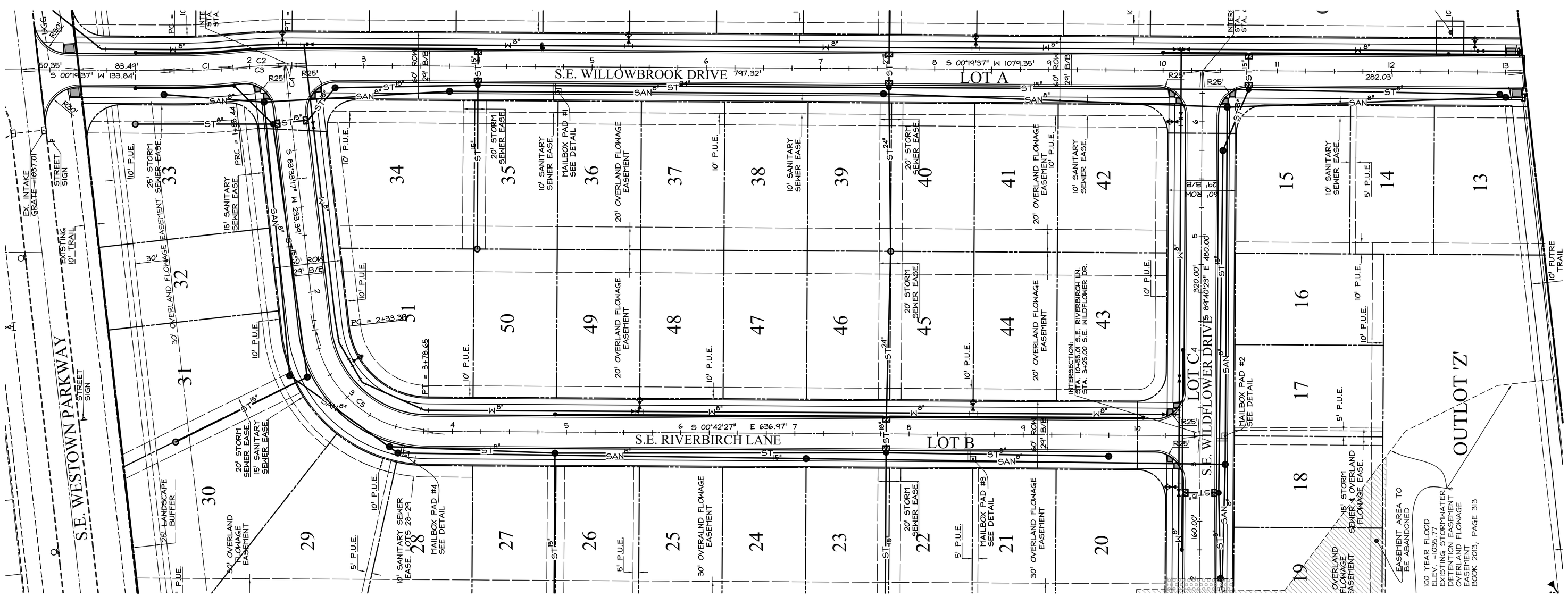

STREETS ARE 29' WIDE WITH 7-INCH NON-REINFORCED CONCRETE PAVEMENT.

APPROVED FOR CONSTRUCTION BY CITY OF WAUKEE: 5-21-2013

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PAVING
WESTOWN MEADOWS PLAT 2

SHEET 11 OF 13

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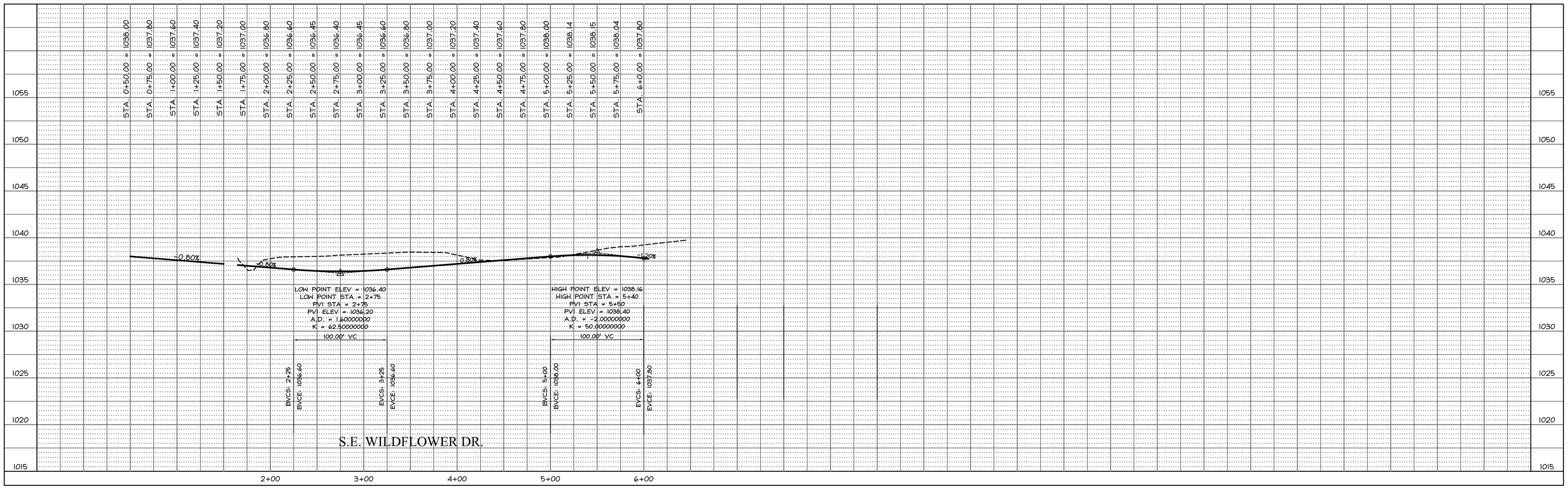

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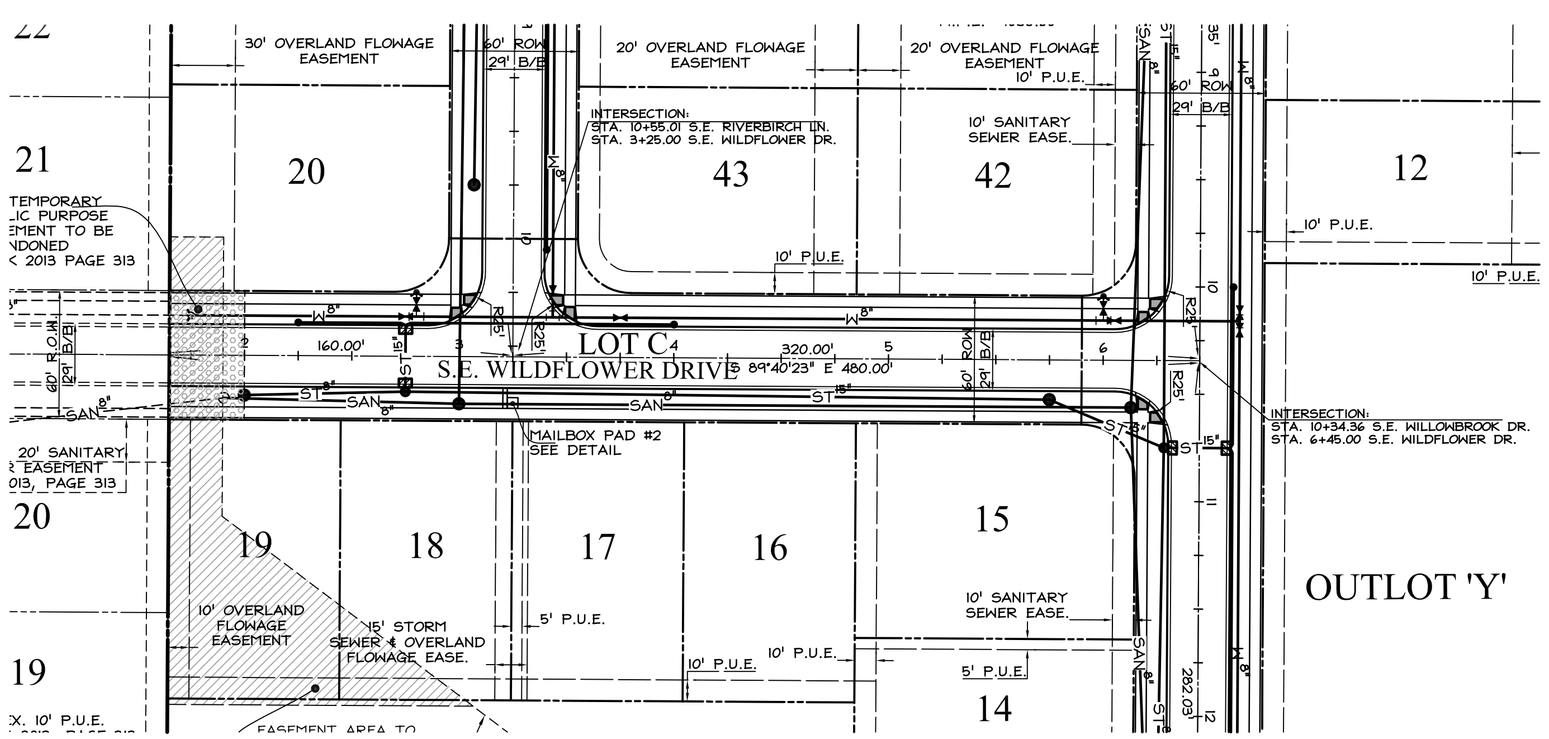

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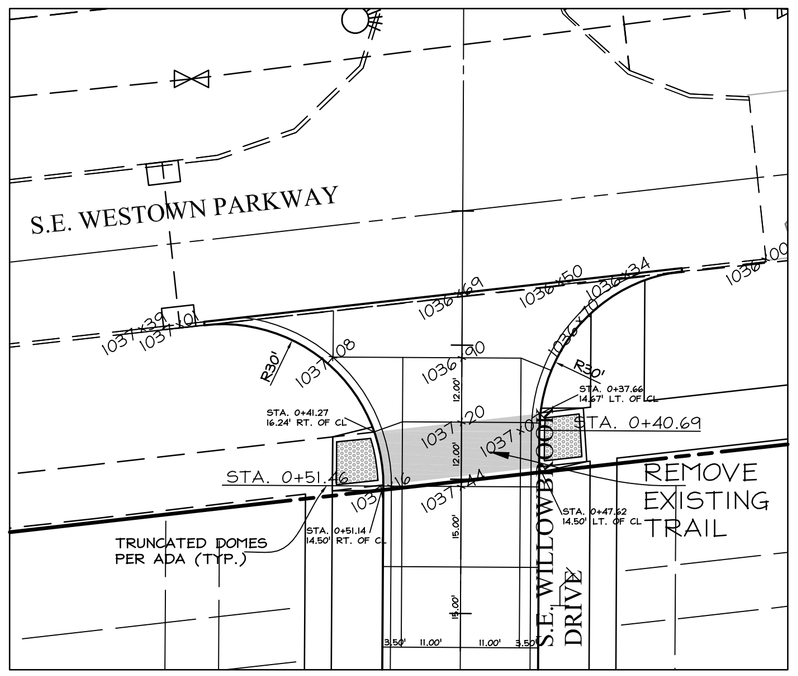
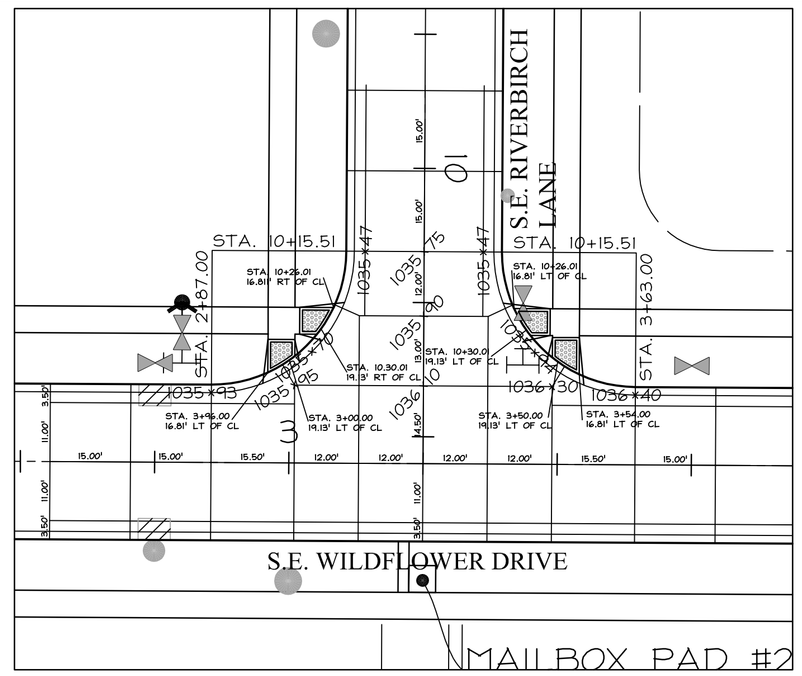


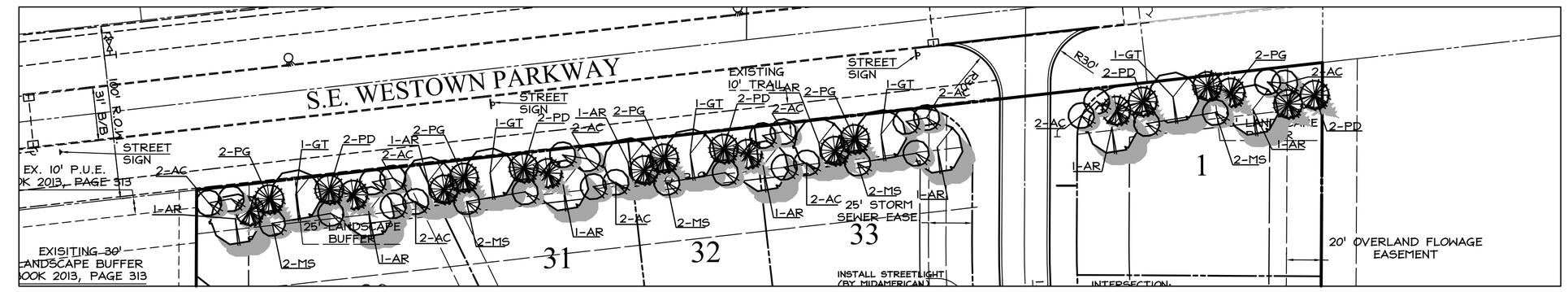
INTERSECTION DETAIL

S.E. WESTOWN PARKWAY AND S.E. WILLOWBROOK DRIVE
SCALE: 1"=20' (GRADES @ TOP OF SLAB)



INTERSECTION DETAIL

S.E. RIVERBIRCH LANE AND S.E. WILDFLOWER DRIVE
SCALE: 1"=20' (GRADES @ TOP OF SLAB)



LANDSCAPE BUFFER PLANTING PLAN

SCALE 1"=50'

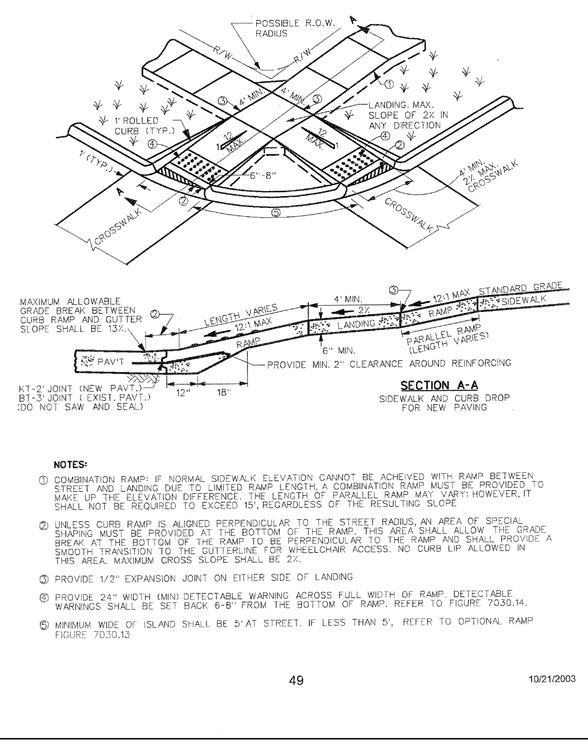
PLANTING SCHEDULE

COUNT	KEY	Botanical name/COMMON NAME	SIZE	CONDITION	REMARKS
10	AR	Acer x fremanii 'Jeffersred' AUTUMN BLAZE FREEMAN MAPLE	3 1/2" cal.	TS/B&B	SEE PLAN
5	GT	Gleditsia Tricanthos HONEYLOCUST	3" cal.	TS/B&B	SEE PLAN
20	AC	Amelanchier canadensis SHADBLOW SERVICEBERRY	5'-6' ht.	TS/B&B	MULTI-STEM
10	MS	Malus species 'Spring snow' SPRING SNOW CRABAPPLE	1 1/2" cal.	TS/B&B	NO FRUIT
10	PG	Picea pungens glauca COLORADO BLUE SPRUCE	6'-8' ht.	TS/B&B	SEE PLAN
10	PD	Picea glauca densata BLACK HILLS SPRUCE	6'-8' ht.	TS/B&B	SEE PLAN

URBAN DESIGN STANDARDS MANUAL — CHAPTER 8 - RECREATIONAL TRAILS & SIDEWALK; SECTION 3 - SIDEWALK DESIGN

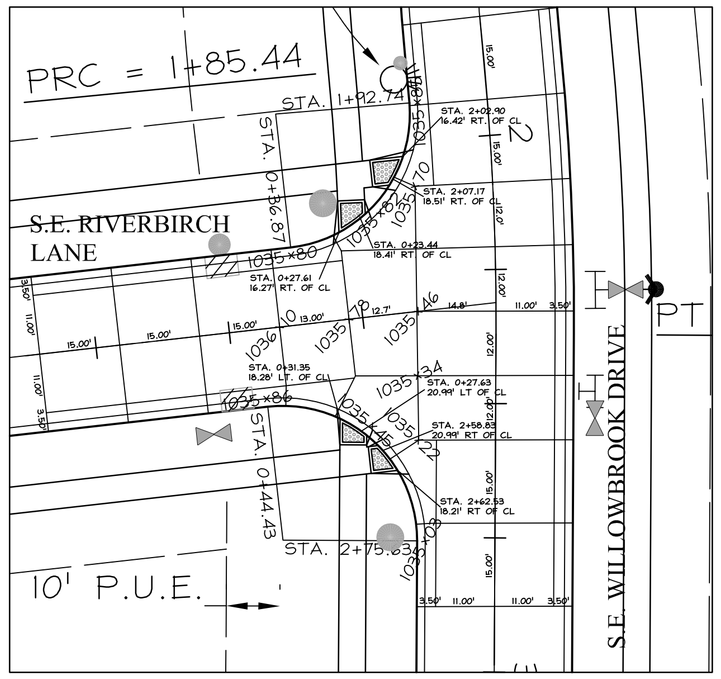
FIGURE 3.5 - PREFERRED CURB RAMP WITHIN INTERSECTION RADIUS FOR CLASS B OR C SIDEWALK
(Corresponds to Figure 7030.12 in Urban Standard Specifications manual)

Note: The following ramp is preferred for use with a Class B or C sidewalk when the crosswalk is located within the intersection radius.



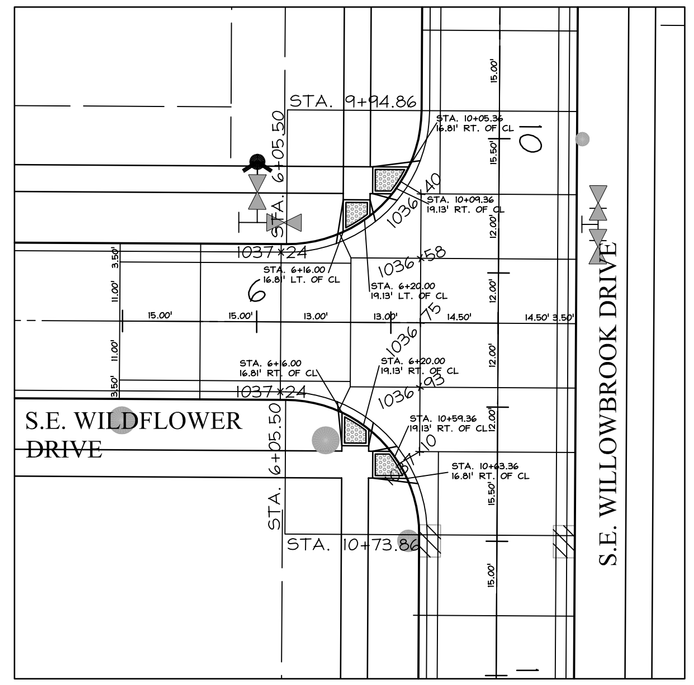
SIDEWALK RAMP DETAIL

- NO SCALE
- FROM CHAPTER 8, SECTION 3, "URBAN DESIGN STANDARDS MANUAL"
- SIDEWALK RAMPS SHALL BE INSTALLED AT ALL INTERSECTIONS, SEE THIS SHEET FOR LOCATIONS



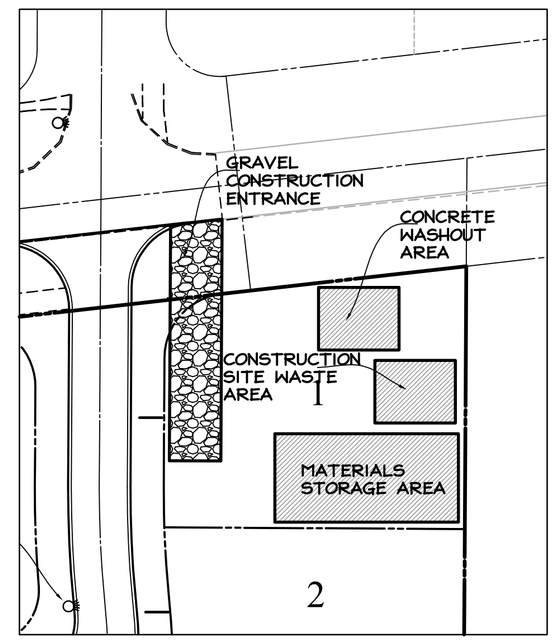
INTERSECTION DETAIL

S.E. RIVERBIRCH LANE AND S.E. WILDFLOWER DRIVE
SCALE: 1"=20' (GRADES @ TOP OF SLAB)



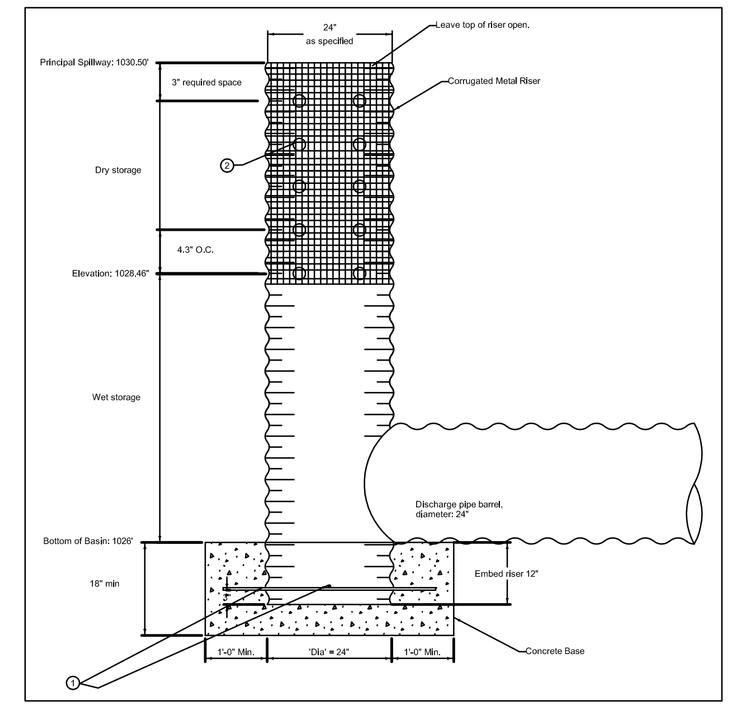
INTERSECTION DETAIL

S.E. WILLOWBROOK DRIVE AND S.E. WILDFLOWER DRIVE
SCALE: 1"=20' (GRADES @ TOP OF SLAB)



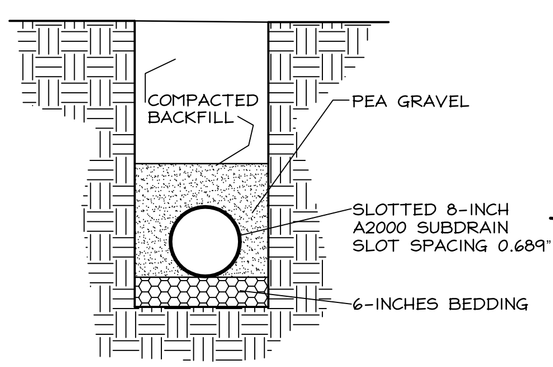
CONSTRUCTION ENTRANCE
MATERIALS STORAGE
CONCRETE WASHOUT

SCALE 1"=60'



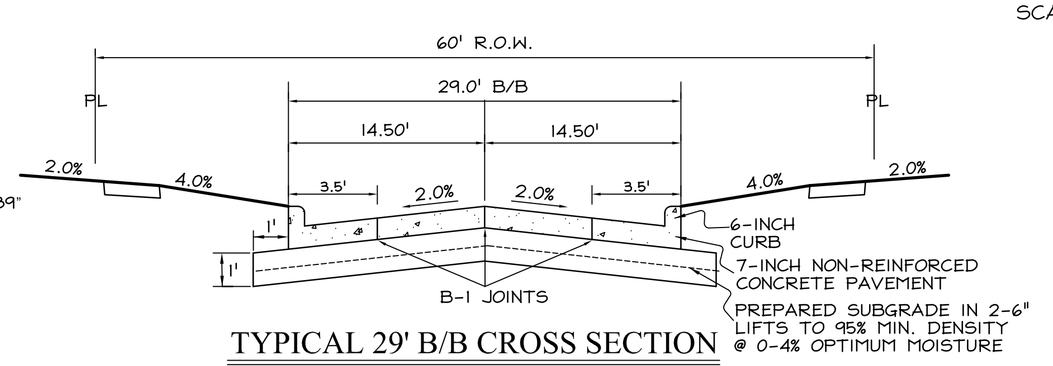
STANDPIPE DETAIL

24" CMP STANDPIPE FOR SEDIMENT BASIN 20
2.25" HOLE IN 4 ROWS OF 5 SPACE 4.3"



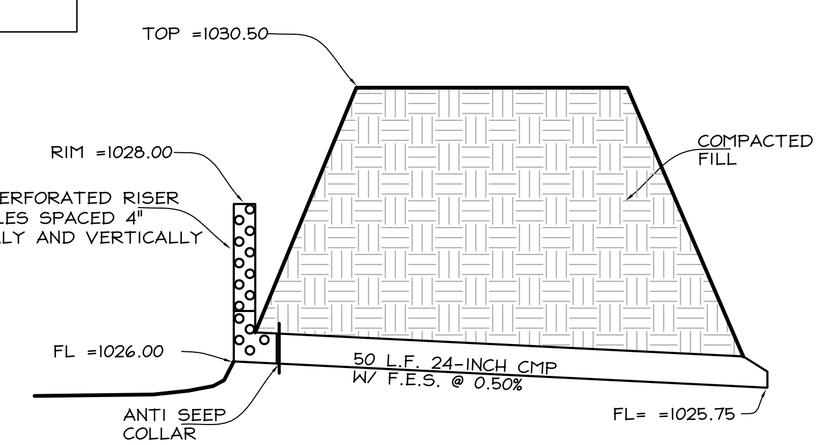
SUMPLINE - SUBDRAIN DETAIL

NO SCALE



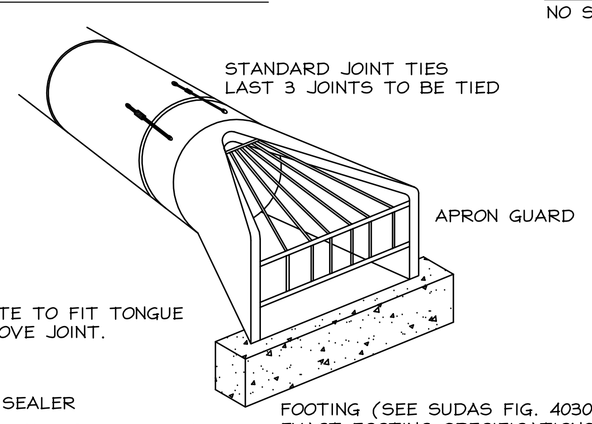
TYPICAL 29' B/B CROSS SECTION

NO SCALE



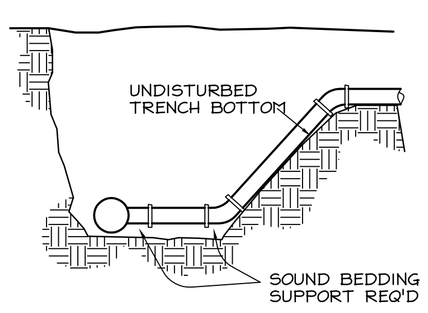
TEMPORARY SEDIMENT BASIN OUTLET DETAIL

(NO SCALE)



FLARED END SECTION DETAIL

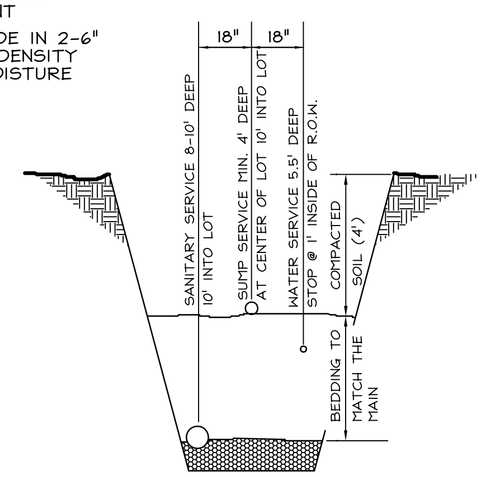
NOT TO SCALE



C) SLOPING LATERAL TRENCH-ANY DEPTH (SLOPE AT 1:1 OR FLATTER)

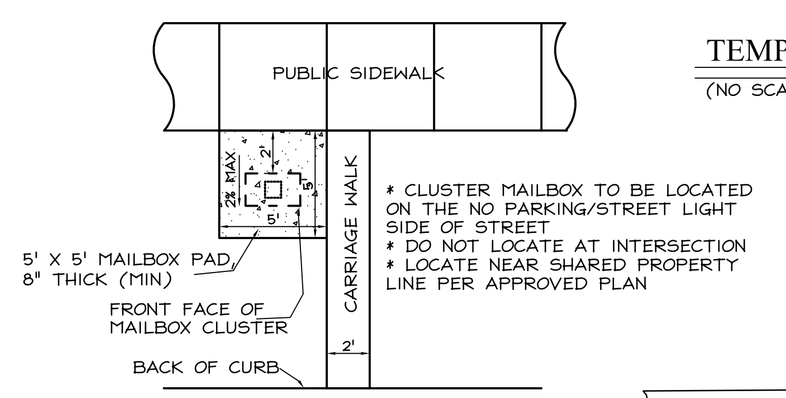
SERVICE RISER DETAIL

NO SCALE



SERVICE LOCATION DETAIL

NO SCALE



WAUKEE STANDARD CLUSTER MAILBOX PAD DETAIL

NO SCALE

IOWA ONE-CALL
800/292-8989
TOLL-FREE
CALL- BEFORE- YOU- DIG

APPROVED FOR CONSTRUCTION BY CITY OF WAUKEE: 5-21-2013

COOPER CRAWFORD & ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th STREET, SUITE 800, WEST DES MOINES, IOWA 50265
PHONE: (515) 224-1344 FAX: (515) 224-1345

DATE: 4-18-2013
REVISIONS: 5-7-2013, 5-16-2013

SCALE:

APPROVED: -- INITIALED: -- AS-BUILT: --

JOB NUMBER CC 1485

DETAILS
WESTOWN MEADOWS PLAT 2

SHEET 13 OF 13

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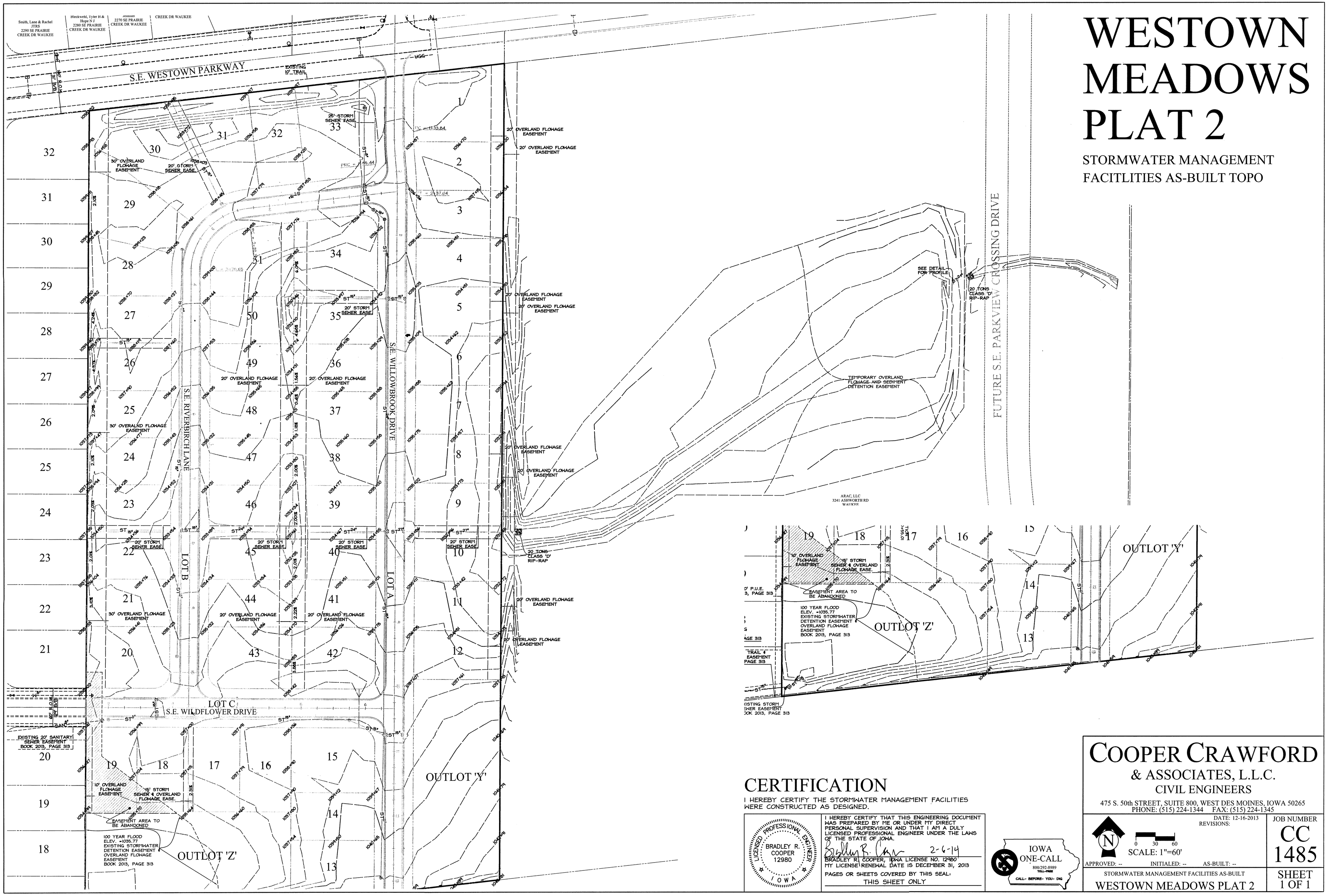
WESTOWN MEADOWS PLAT 2

STORMWATER MANAGEMENT FACITLITIES AS-BUILT TOPO



CERTIFICATION

I HEREBY CERTIFY THE STORMWATER MANAGEMENT FACILITIES WERE CONSTRUCTED AS DESIGNED.

LICENSED PROFESSIONAL ENGINEER
BRADLEY R. COOPER
12980
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

2-6-14

BRADLEY R. COOPER, IOWA LICENSE NO. 12980
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2013
PAGES OR SHEETS COVERED BY THIS SEAL:
THIS SHEET ONLY

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COOPER CRAWFORD
& ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th STREET, SUITE 800, WEST DES MOINES, IOWA 50265
PHONE: (515) 224-1344 FAX: (515) 224-1345

DATE: 12-16-2013
REVISIONS:

SCALE: 1"=60'

APPROVED: -- INITIALED: -- AS-BUILT: --

JOB NUMBER CC 1485

STORMWATER MANAGEMENT FACILITIES AS-BUILT
WESTOWN MEADOWS PLAT 2

SHEET 1 OF 1

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