DATE: 02/09/2017

PROJECT: COG Engineering Division – Construction Specifications Revisions

SUMMARY:

The following notes are the proposed amendments and the action for the **Front-End Documents** of the Construction Specifications (General Conditions and Supplementary Conditions along with Bidding, Agreements, Contracts, and Project Coordination) of the 2012 City of Gillette Construction Specifications.

SECTION:	NOTES/ACTION PROPOSED/TAKEN:
SC-1.01	Weather Day – working day vs calendar date contracts, under longer working day contracts should there be proportional number of hours not worked to constitute weather day?
	(no action taken, address weather impacts on longer working day contracts with SP) Included SDDOT language that allows for Adverse Weather Correction Days if correction efforts prevent progression of work for more than 5 hours (similar to a weather day). Also defined Controlling Item.
SC-2.03.A.2	Fixed completion date contract – statement of working days, if not agreed upon by Contractor and Engineer, statement is to be reviewed by the City Engineer for final decision. What was original intent of this process, seems counterintuitive to bring the Owner's rep into the final decision making.
	(no action taken) This SC was intended to provide a form of resolution in the instance of Contractor not agreeing with the Engineer's statement of working days, prior to litigation, since no other form of recourse is available between the Contractor and Engineer.
SC-6.06	Subcontractor substitution- If the Owner or Engineer objects to a material supplier or sub-contractor and requires the Contractor to utilize a substitute supplier or sub-contractor there should be an adjustment in contract price equal to the difference in price between the supplier/sub-contractor utilized in the bid vs the proposed substitute. If the Contractor elects to utilize a substitute supplier/sub-contractor strictly as their choice without the Owner or engineer requesting a change then there should not be an adjustment in price.
	Language added to not retain bidder's bid bond if cannot provide substitute at equal cost. No change in pricing language was added so not to compromise the integrity of the bidding process.
GC-Articles 6-9	Contractor/Owner/Engineer's roles – Change the process for requesting meetings with the City. Right now we have to schedule them through the engineer who does not always give us the meeting.
	(no action taken, requests for meetings still to made through the Engineer, and meetings to be held as necessary)
GC-10.05 (and SC 10.05)	Claims – The Engineer gets to deny/approve claims, if the claim is against them they can deny with our next step being mediation/arbitration, not a place we want to go in almost all cases.
	(no action taken) Upon review of this SC with our legal counsel the City has decided to retain this language.
GC-11.01 and SC-11.01	Cost of Work – Application of Foreman and Superintendent rates not always applied uniformly. Also, increase in benefit costs should be looked at (from 25% to 50%)
	Increased percentage that can be charged for benefits for unit price work, from 25% to up to 45%.
SC-11.03	Unit Price Work – does parts 1 and 2 apply to both 3 and 4, or is the intent that 4 is a stand-alone condition that warrants unit price adjustments?
	Changed percentage that unit price negation is allowed, from 15% to 10% of total contract, and variation in unit quantity from 25% to 30%. Clarified that both 1 and 2 apply to either 3 or 4, and that contractor or owner can initiate price negotiation if they feel additional cost or reduction in price is warranted based on the criteria.

SC-14.07.C	Clarify Final Payment/Retainage Release information
	This section reads in accordance with State Statute W.S.16-6-116 and 117. Clarified the terms used in the summary regarding retainage release and final payment (one in the same as far as the Statute is concerned).
Section 00500, 4.03	Liquidated Damages - Contract Time language needs to be updated so contractors cannot be charged double LD's
	Changed final completion date in reference to date of issuance of Cert. of Substantial Completion, not in reference to date of Contract Time commencing, to eliminate overlap.
Section 00600	Developer's Warranty - remove the "continuous service" phased-in warranty start date option. This language is copied from the General Contractor's Warranty and only applies to Capital Construction projects.
	Made correction, eliminating phased-in warranty language for development warranties.
Section 01041, 1.03.B&C	Clarify material testing requirements. Owner provides QA, Contractor responsible for QC. Add retesting cost language of 02210, as applicable to all areas of testing (compaction, materials, asphalt, concrete, etc).
	Made changes to clarify QA/QC responsibilities, and retesting of failed test at Contractor's expense is applicable to all failed/repeat tests.

DATE: 02/09/2017

PROJECT: COG Engineering Division – Proposed Construction Specifications Revisions

SUMMARY:

The following notes are a list of the proposed amendments and the resulting action for the **Earthwork, Trenching, and Backfill** related sections of the 2012 City of Gillette Construction Specifications.

SECTION:	NOTES/ACTION PROPOSED/TAKEN:
Section 01041, 1.03.B&C	Clarify material testing requirements. Owner provides QA, Contractor responsible for QC. Add retesting cost language of 02210. All testing responsibilities should be applicable to all areas of testing (asphalt, concrete, earthwork, trenching, etc.).
	Made changes to clarify QA/QC responsibilities, and retesting of failed test at Contractor's expense is applicable to all failed/repeat tests.
Section 01500	Erosion Control – Std Item 1 should include language for "post-construction" bmp installation and maintenance. Clarify responsibilities both during and post construction.
	(no action taken, use SP if different than intended in spec)
Section 02210, 2.06.A&B	Rejected Material Define what rejected material is.
	Defined rejection if over 12% above optimum. Contractor must blend or dry material between 6% and 12%, with payment for import for blending as approved by the Engineer.
Section 02210 3.02	Compaction Specifications - My concern is that compaction and moisture specs are difficult to implement in the field. The inspector needs to classify the soil so that they know which moisture/compaction spec is applicable. I suggest that there be 2 different compaction specs. One for clay soil and the other for granular soil. I think this will achieve the intent and simplify the implementation. Also, review current frequency spec for any potential improvements.
	Reduced to 3 classifications for density. Clays (90%), Fat Clays (88%), and Sands (92%)
Section 02210 3.03.E	Contractor to pay for retesting - the current specifications require the contractor to pay for retesting, but it is not consistently enforced. On 95% of the projects it is not an issue; however, on one or two projects this year the testing budget has been exceeded (nearly doubled) on a small project due to re-testing. Enforce or remove?
	Added retesting responsibilities of the Contractor to pay for retests in Section 01041, Project Coordination.
Section 02210, 3.06 **Section 02231, 3.04**	There has been issues with the proof rolling of subgrade. I think the spec is clear in that "it may be specified", I think the issue may be that it is being required in the field when it hasn't been specified in the plans or a bid item called out.
	Made incidental so Subgrade Prep, Exc Below Subgrade, Base Course and Sub-Base bid items.
Section 02210 4.02.A.1	Unclassified Excavation Above Subgrade a. Needs to be included on every project. b. Only pay items that pays you to shape and grade a project.
	(no changes made to the spec, include as necessary on projects)
Section 02210, Std Item 9	Eliminate Bid Item "Overlot Grading"
	Bid item eliminated due to lack of utilization, work otherwise covered in other bid items.
Section 02210, 4.02.A.2	Excavation Below Subgrade a. Update to the following: i. Payment shall include all tools, labor, equipment and incidentals necessary to complete the excavation, inspection of exposed soil

	for saturated or yielding conditions, scarifying, moisture conditioning, placement, and compaction of existing soil. ~~Or imported borrow material below the bottom of the subgrade processing.~~ b. As this item sits right now it is up to the engineer on how we handle the material below subgrade. A lot of times engineers do not want to pay reject and import due to the higher cost even if the material is soup. Changing the bid item to the above would make it clear at bid time if the engineer expects us to process poor soil.
	(no changes made to spec, amended the Rejected Material definition to be based on moisture content)
Section 02210 4.02.A.3	Rejected Material Disposal a. Update to the following: i. Payment shall include all tools, labor, equipment and incidentals necessary to complete the excavation, haul off and disposal of reject material. This would provide clear direction at bid time if the material above or below the subgrade should be hauled off and disposed of during bid time.
	(no changes made, kept defined as "loading, hauling, and disposal" of rejected matl.)
Section 02210 4.02.A.4	Surplus Material Disposal Make incidental to 02210.01.
	(no changes made, kept as separate bid item)
Section 02210 Std Item 04	Surplus Matl Disposal - Adjust the method of measurement to match the basis of payment description on what is included in the item – needs to include loading and hauling the material, not excavation (covered under uncl. ex.)
	Corrected the method of measurement to "loaded, hauled, and disposed of…" to match the basis of payment.
Section 02220 & 02210, 2.07	Utility Line Locates/Crossings, review and incorporate changes, make applicable to Subgrade work.
	Included revisions to simplify and clarify Underground Facility Crossings and Locates. Made applicable to both trench excavation and subgrade preparation work.
Section 02225, 02665, 02700	Create separate pipe bedding bid item, not incidental to pipe install, in the water and sanitary sewer sections, or use the pipe bedding bid item in trench backfill if not intended to be native material. Could accomplish by clarifying that the "pipe bedding" provided for as incidental to pipe install is native material.
	Made clarification that pipe bedding included in pipe install is native material. Renamed Type II Bedding to "Trench Foundation" material. Changed method of measurement of Type I Bedding from tons to CY.
Section 02225, 4.01.A.1	Consider amending method of measurement for certain materials (Type 1 Bedding) to be based on volume instead of weight.
	Changed Type 1 Bedding measurement to CY since typically not being weighed. Kept Type II (Trench Foundation) to be measured by tons since usually hauled in and weighed.

DATE: 02/09/2017

PROJECT: COG Engineering Division – Construction Specifications Revisions

SUMMARY:

The following notes are a list of the proposed amendments and the resulting action for **Aggregate, Concrete, and Asphalt** related sections of the 2012 City of Gillette Construction Specifications.

SECTION:	NOTES/ACTION PROPOSED/TAKEN:
Section 02231, 3.03.D	Aggregate Sub-Base and Base Courses 1. 3.03 C – This section talks about the compaction requirements but does not state how often. It is in other places in the spec. book. Add frequency language from 02210, or reference it.
	Made reference to Section 02210 for frequency of compaction tests for aggregate sub-bases and base course.
Section 02511 2.02.A	ASTM D1190 replaced by D6690 in 2012.
	Updated ASTM reference for crack sealant.
Section 02512, 4.01.A	Adjust paving bid item and patch bid item (change the limits that define each of them).
	(no changes made, kept dimensions as currently outlined, address abnormal "patching" or "paving" quantities as necessary on a per-project basis)
Section 02512, 3.02.L	Allow for full-depth of asphalt patch bid item to be placed with uniform grade of asphalt (all ¾" or all ½", depending on availability).
	Retained two lift requirement of ¾" and ½", but allowed for Owner's approval of uniform full-depth placement depending on patching circumstances (size, location, timelines, mix availability, etc.)
Section 02512, 3.04.B.2&3	Provide clarification on what to do with additional pavement cores and their measured thickness when analyzing for pavement thickness deficiency or acceptance.
	Added language to average the additional cores that are required to be taken after the first one is shown to be deficient.
Section 02512, 2.01.E	Consider a Recycled Asphalt Pavement RAP design spec. Have currently been allowing up to 15% RAP material in asphalt mix designs. The gradation testing for recycled asphalt is complicated- something that needs addressed.
	Added a RAP spec section to include the current policy of allowing up to 15% RAP, a portion of which can be RAS, while still meeting all AC Paving mix design parameters. Clarified that gradations for RAP mix designs shall be based on the Mix Verification rather than cold feed gradations.
Section 02512 3.01.K.1	The Plant Mix Pavement testing requirements maybe need some clarification. 3.01, K.1. states that when any Marshall Test result is not in compliance…… 2.01 D. covers the Marshall design criteria and states (in part 4) that after the JMF is established all mixtures shall conform to the following ranges and ranges are given for only a portion of the Marshall items. We have always performed the Flow and Stability but it's not clear if they are considered for acceptance. Do we need to add the acceptable ranges of tolerances for Flow and Stability under Part 4? Also don't know if there is an easy answer for failing tests, but it is difficult on the smaller/overlay projects when the paving can be completed before results are obtained and you are supposed to notify plant, and then take additional samples etc. It gets spread out due to the testing procedures and lots of potential for disputes.
	Added flow and stability criteria to the acceptance measures.

Sections 02520 3.21.B, 02530 3.11, and 03310 3.10.C,	Review acceptance language for random cracks. Look to add or adjust any language as necessary between the differing concrete items.
	Included random crack remediation language from 02520 in other concrete sections.
Section 02520 2.01.C.	Add a spec for Dow Corning 890-SL Silicone Joint Sealant for asphalt-to-concrete joint sealing.
	Added the Dow Corning spec.
Section 03310 3.03.D.2 and Section 02520 3.17.D., 02528 3.06.B, 02530 3.07.B	Is the 60 degree surface temp for 72 hours necessary/achievable? These sections differ on the protection of concrete in cold weather applications.
	Made cold weather concrete language uniform between all concrete sections by referencing Section 03310 Concrete Work. Adopted guidelines from ACI 306 regarding temp limits and strength.
Section 02528, 4.02.A	Concrete Curb, Combined Curbs and Gutters 1. 4.02 A 1 02528.01X Install New X" Curb and Gutter (Tangent) a. Update the payment to the following. i. Payment will be for all materials, including concrete, premolded mastic material for expansion joint, sealant for all mastic material, contraction joints, curing of concrete; placing topsoil behind the curb; and all equipment, tools and labor necessary to complete the item. b. Subgrade preparation should be paid under the subgrade preparation pay item. Subgrade preparation requirements should match the typical cross sections for the road. 2. 4.02 A 3 02528.01X Install New X" Curb and Gutter (Radius) a. Same as tangent. -We have frequently amended the "New C&G, VG, and Fillet" items as it has always been my understanding that these items had prep included inadvertently in the last revision. When "new" items are used the prep typically is covered under the entire roadway with the Paved Road Processing item, not incidental to the concrete items.
	Removed subgrade prep as incidental to "new" concrete items, to be paid under subgrade prep for roadway.
Section 02530 2.01.D.	Update colored detectable warning panel approved products list.
	Added color options to include "approved equal" and "or other approved contrasting color".
Section 02530	Concrete Sidewalks, Driveways etc. 1. 4.02 A 4 02530.04X Install Concrete Driveway a. Change preparation requirement to 12". – changed from 24" to 12" 2. 4.02 A 5 02530.05X Install Concrete Driveway Apron a. Change preparation requirement to 12" – eliminated bid item, to be included in Driveway bid item. 3. 4.02 A 6 Install New Concrete Valley Gutter (X") a. Payment will be for all materials, including concrete, premolded mastic material for expansion joints, sealant for all mastic material, contraction joints, curing of concrete; and all equipment, tools and labor for the performance of all work necessary to complete the item. i. Follow the typical road cross sections no reason to do additional prep under this item. – removed subgrade prep from item, to be included in roadway. 4. 4.02 A 7 Install Replacement Concrete Valley Gutter (X") a. Remove incidental subgrade prep as stated for new. – kept sub prep, reduced from 24" to 12". 5. 4.02 A 8 02530.08X install New Curb Return Fillet (X")

	a. Subgrade preparation should follow typical sections as stated for the valley pans. – removed sub prep from item, to be included in roadway. Added "to include radius curb" to item. 6. 4.02 A 9 02530.09X Install Replacement Curb Return Fillet (X") a. Subgrade preparation should follow typical section and not be incidental. – kept as incidental, reduced from 24" to 12". Added inclusion of radius curb in item. 7. 3.07 Protection B a. When concrete is being placed in cold weather follow the recommendations as set forth in ACI 306 Guide to Cold Weather Concreting. – Added ACI cold weather guidelines to 03310, 3.03.D, and referenced this section throughout other concrete sections of 02520, 02528, 02530, and 03304.
Section 02530 3.04.D.3	Broomed finish; The slip forming curb and gutter industry is switching to primarily a broom with the flow of water in curb lines. Reading the spec book on the broom type it is listed as transverse to the direction of travel, what is the direction of travel on curb and gutter? And would the City be open to possibly looking into allowing a direction change on the broom of the curb?
	(no changes made, not disallowed under 02528, 3.04.C)
Section 02530 Std Item 8 & 9	Should this item include the radial curb and gutter in the fillet bid items? Currently paid for under separate Curb and Gutter (radius) bid item (02528.03 & 04).
	Removed Radius Curb bid items and tangent references in Curb item. All curb to be paid for under New or Replacement Curb and Gutter, except curb and gutter that is incidental to Fillet sections.
Section 02530 Std Item 4&5	Include driveway aprons as incidental to driveways, items are redundant.
	Made amendment, removed Driveway Aprons, now incidental to "Install Concrete Driveway".
Section 02551, 4.02.A	Application of tack coat between all lifts of asphalt. Add clarity for price adjustment if not used, necessity to use based upon Engineer's judgement.
	Kept tack coat requirement between all lifts. Added price adjustment language if determined not necessary to apply.
Section 03304, 2.07.B	Consider an increased concrete slump spec of 5 inches for City Class B mix (currently 1-4 in).
	Increased slump for all classes of mix to 5". Slumps over 4" must contain a water-reducing admixture. All concrete mix design parameters must still be met.
Section 03304, 2.04.C.3. **Section 02190, 2.02**	Deleterious substances max % allowed (2%) doesn't correlate with section 02190 2.02.B.2.a. (3%)
	Made consistent with 2% max allowed deleterious substances.
Section 03304, 2.07.B	Class S (Slurry) mix design comments from Project Engineer – needing to confirm design strengths on approved slurry mixes, need for design strength range (currently min of 60psi): Typical submittal mix design strength is 150 PSI at 28 days. Typically, for Controlled Low Strength Materials (CLSM), there is a compressive strength test to verify this. To be specific, ASTM D 4832 details how to take samples and test them. As a reference, 200 PSI is the high end for excavatable flowable fill. I had pulled together a few sources on the mix to compare and the 150 PSI suggested didn't seem out of line based on the proportions shown, esp with the Fly Ash added. The water to cement ratio is higher than the few other mix designs I found online. Mainly, we were looking for confirmation that the design estimate of150 PSI is accurate. We're seeing mix designs that appear to meet specifications yet no confirmation exactly what these are. If you do compare the submitted mix design to the Class S (slurry) in section 03304,

	the submitted mix design is more than double the specified. This isn't necessarily a bad thing (35-200 PSI is the normal range for excavatable fill), but no one really knows exactly what we are putting in the ground.
	Included strength range for Slurry of 45-200 psi.
Section 03310 3.03.C.2	Add rejection/corrective/remediation language to the Plastic Shrinkage Cracking spec.
	Added language to part 3.10.D, that when precautions outlined in 3.03.C were not taken and plastic shrinkage cracking occurs, Contractor may be required to remove and replace affected work pending evaluation by the Engineer.

DATE: 02/09/2017

PROJECT: COG Engineering Division – Construction Specifications Revisions

SUMMARY:

The following notes are a list of the proposed amendments and the resulting action for the **Water, Sanitary and Storm Sewer** sections of the 2012 City of Gillette Construction Specifications.

SECTION:	NOTES/ACTION PROPOSED/TAKEN:
Section 02665, 3.05.D	Need to include a spec for Bulldog restraint systems including installation guidelines.
	Added spec for Bulldog Restraint System, witness marks on pipe shall be visible to assure no over-homing of pipe occurs, along with temporary external joint harnesses.
Section 02665 2.01.B.1	Update tapping sleeve approved products list. Accept Triple Tap (TPS brand)?
	Eliminated Smith Blair 622 series, added TPS brand as approved product.
Section 02665 2.01.H	Disallow use of 4" Matco valves given recent performance issues on various projects.
	Amended gate valve section to disallow 4" Matco valves. Will revisit acceptance as appropriate with design correction and proven successful functionality.
Section 02665 3.01.E.10 & Standard Dwg 02665-01	Thrust blocking – is it required with 11.25-degree bends (yes)? Is it required for reducers with mega-lugs (not specified)?
	Added thrust blocking being applicable to reducers in spec., was already in standard drawing.
Section 02665 3.01.E.8,10	Watermain lowering – four 45 degree bends, gravity blocking, is it necessary?
	Clarified need for gravity blocking, added detail to standard drawing 02665-01.
Section 02665, 2.01.R, 3.01.E.13 & 4.02.A.1	Tracer Wire testing – need to clarify who is responsible for the testing and when it is supposed to be completed.
	Added clarity that Contractor must test tracer wire prior to street surfacing or prior to placing into service, owner may test prior to placing water line into service. Added other termination points as shown on plans. Standardized wire type for boring vs trenching applications. Wire connectors for splicing shall be rated for direct bury.
Section 02675, 1.01.A, 3.01.A.4, 3.01.C.6	Water disinfection and hydrostatic testing, clarity on Contractor responsibility, or City crew performing, or having CM firm complete the testing requirements.
	Clarified that all tests are the responsibility of the Contractor, and passing tests must be reported to the Engineer for reporting.
Section 02700	Consider use of Cascade brand sewer service saddle. Add Bulldog Restraint System language from water section.
	(no changes made, can be considered as an approved product on a per project basis). Added Bulldog Restraint System language from 02665 as applicable to sewer pipe.
Section 02710	Horizontal Directional Drilling – look at recording of grade spec for flatter cased bores, also make spec applicable to water line projects with HDD
	Made HDD applicable to both water and sewer. Amended 2.04.B regarding accuracy of equipment needed (1/10th % measurement for gravity sewer lines at 2% or less, 1% for all others).
Section 02710, 3.14.C	Horizontal Directional Drilling – are observation shafts necessary with the camera readings or equipment readouts providing grade information.
	Added that observations shafts could be requested if other readings or records indicate that pipe grade is out of spec.
Section 02725, 2.01.C&E	I was wanting to see if you would allow our duromaxx into this specification and also allow our aluminized type 2 coated CMP as well. I have attached more information on the aluminized type 2 coating as well as some recent studies showing it has 6-7 times the life expectancy than galvanized CMP. I bring this up because have recently had some projects in the Gillette area come up where this specification has required them to use aluminum alloy

	pipe. Not that it cannot be provided but it is much more expensive than the aluminized type 2 option.
	Added Type 2 Coated Aluminized Steel pipe to the Corrugated Aluminum Alloy pipe section. Still limited to slotted drain and private driveway culverts as outlined in the Storm Drainage Design Manual. Added Steel Reinforced PE Pipe under the Materials section, outlining specs similar to those met by the previously approved DuroMaxx pipe.
Section 02725, 2.01.K1&2	Update frame and grate to current Neenah model numbers.
	Updated all single and multiple inlet models and numbers with the current manufacturer data.
Section 02895	Create standard bid items for Install Erosion Control Blankets and Install Paving Fabric or Paving Geogrid
	Install Erosion Blankets is already a standard item under section 01500, E&S Control. Added paving grid standard item.
Section 02895 2.01.D,E,&F	Add a materials section for geogrid. (update any dated geosynthetic spec callouts)
	Added geogrid specifications, for all types. Updated ASTM references for geosynthetics.
Miscellaneous Comments	Other 1. Incidentals a. Curb Stops – 02665, 4.01.30, Added "Install Replacement Curb Stop" standard item. b. Concrete around water valves, manholes, inlets etc. Area inlet collars are on detail only, not in basis of payment. Install/Adjust bid items should both include collars in basis of payment. (Adjusted all items in 02570 and 02665 accordingly to include concrete collar where not already called out) 2. Bid Items, we have had the need for "Install Replacement Water Valve Box" (replacement box covered under 02570.05 Adjusting), "Install Manhole Ring and Cover" (Created 02570.16 standard item), "Install HDD Water Line" (Amended section 02710 to include water HDD, included standard item for install HDD water line), "Abandon Storm Sewer in Place" (address with SP), "Remove Guardrail" (address with SP), "Install Box Culvert" (address with SP).

DATE: 02/09/2017

PROJECT: COG Engineering Division – Design Standards Revisions

SUMMARY:

The following notes are the proposed amendments and the corresponding action for the **Design Standards**.

SECTION:	NOTES/ACTION PROPOSED/TAKEN:
101	Correct the Final Submittal Checklist TIA requirement (250 trips/day, not 150) to correlate with section 611.
	Updated to 250 trips/day to correlate with section 611.
301.00	Update minimum hydrant requirement to meet fire flows as outlined in the latest edition of the IFC.
	Updated the Design Standard language to clarify the number hydrants needed to provide required fire flow protection given the zoning type the structure is located in.
301.10	Amend the definition of "transmission line", remove 18" and larger reference. This is necessary given the variation of functioning transmission lines with the recent Madison Regional Extension projects that serve numerous district via multiple line sizes and types that function as transmission.
	Updated the Design Standards accordingly, redefined "Transmission Line" based on functionality, removed 18" pipe size reference.

2017 STANDARD DRAWING CHANGES FROM 2012 EDITION		
Standard Drawing Name	Standard Drawing #	Description of Change
Water/sanitary sewer trench & bedding	02220-01	1. Added Pipe Foundation, removed Type 2 bedding
		2. Added separation fabric note
		3. Added reference to Specification section number 02225 in addition to 02220
Typical Street repair	02511-01	1. Removed the 12" mill around perimeter of pavement repair area
Typical Collector and Local Street Sec.	02512-02	1. Added sidewalk width and C&G types as a note at bottom
Commercial & Industrial access control	02530-03	1. Changed minimum driveway width to 20' on collector and arterial
		2. Changed minimum curb radius to 20' on local, collector and arterial
		3. On note 2 added wording for increased spacing as warranted
Curb Ramp Local/Local through Streets (Detached Sidewalk)	02530-07	1. Added (full width of ramp) to detectable warning panel note
Curb Ramp Local/Local through Streets (Attached Sidewalk)	02530-08	1. Added (full width of ramp) to detectable warning note
		2. Removed last two lines in diagonal ramps note
Manhole Adjustment Detail	02570-01	1. New detail for round concrete collar but left the diamond detail in for adjusting or rehab
		2. Note on the bottom of detail includes the labeling of STORM or SEWER on lids
		3. Added Dow Corning 890 SL to seal between concrete and surrounding pvmt.
		4. Added note 6 regarding diamond collars on rehab/adjusting or repair work
		5. Added note stating no saw cuts allowed outside of concrete collar
Water Valve Adjustment Detail	02570-02	1. New detail for round concrete collar but left the diamond detail in for exceptions
		2. Added note stating no saw cuts allowed outside of concrete collar
Thrust and Gravity Blocking for Water Main Fittings	02665-01	1. New Gravity block drawing and notes
		2. Table for gravity block volumes
Double Inlet	02725-02	1. Moved frame and grate note to bottom of page and added type "L" grates to note
		2. The note pertaining to the Neenah frames, curb box and grates was changed to include updated model numbers
Cathodic Protection/Tracer Wire Test Station	02665-05	1. Change #12 to #10 AWG Copperhead Superflux copper tracer wire
SINGLE INLET	027525-01	1. Moved frame and grate note to bottom of page and added type "L" grates to note