

Scott Boettcher

From: Kahle Jennings <KJennings@cityofcentralia.com>
Sent: Friday, September 23, 2016 4:22 PM
To: Scott Boettcher
Cc: Kahle Jennings; Rob Hill
Subject: China Creek Phase 2
Attachments: FINAL Local Flood Relief Project Recruitment Form -- China Ck P2.docx; Centralia Phase 2 China Creek Concept Map.pdf

Scott,

Attached is Centralia's application for China Creek Phase 2 Construction funds.

Kahle Jennings
Centralia Public Works



2017-19 Local Projects Recruitment Form

Chehalis Basin Flood Relief

A. What are local flood relief projects? -- In general, local projects are those projects that provide predominantly localized and quantifiable benefit, are capable of being completed within the funding cycle, are supported by the jurisdiction within which the project is proposed, and are vetted and advanced through a public entity like a City, County, Conservation District, Agency, etc. Furthermore, local projects are envisioned as helping with flooding, not adverse to fish or habitat and (where possible) providers of multiple, quantifiable benefits.

B. What kinds of local flood relief projects are likely to be logical funding candidates for 2017-19?

- Projects that complete an effort previously funded/started.
- Projects that advance improved emergency response.
- Projects that advance improved public infrastructure protection.
- Projects that advance improvements in local or community flood hazard reduction, including local flood proofing projects (e.g., elevations, buy-outs, foundation venting/opening, etc.).
- Projects that advance Conservation District initiated flood hazard reduction (e.g., farm pads, evacuation routes, bank erosion/bank stabilization, etc.)
- Projects that demonstrate innovation (e.g., thinking beyond traditional bank stabilization techniques in favor of natural system designs), partnerships, cost-sharing/leveraging resources, multiple benefits, and proactive vetting with agencies and tribes.
- Projects typically not in excess of \$3M for the stage/phase being funded.

C. Are there projects that would not be good candidates?

- Projects that seek to utilize State Capitol Budget dollars for uses not typically allowed (e.g., maintenance and repair work, cost-sharing under select circumstances, etc.).
- Projects likely to increase potential for flood damage upstream or downstream.
- Projects with unmitigable adverse environmental impacts or significant uncertainty regarding potential environmental impacts.
- Projects not sponsored by a public entity.

Instructions:

- Please submit local flood relief project requests (via this form) to Scott Boettcher (scottb@sbgh-partners.com) no later than 5:00 p.m., Friday, August 12, 2016.
- Please submit one request form for each project proposed, even those past projects previously or partially funded.
- Note: Parts III and IV below [marked by "(**)"] will be scored as part of the Flood Authority Projects Committee's review and evaluation. Part I and II will not be scored.



Part I General	
1. Date:	September 23, 2016
2. Project Name:	Phase 2: Construction, China Creek Flood and Habitat Mitigation Project
3. Project Location -- Please identify the location of the project as precisely as possible, including providing decimal degree latitude/longitude coordinates.	The approximate center of the project is located at 46.725828 N lat. -122.947219 W long.
4. Project Contact -- Please identify who will be responsible for overseeing and managing the project (i.e., name, email, telephone number, etc.).	Kahle Jennings Public Works Director, City of Centralia (360)330-7512 kjennings@cityofcentralia.com
5. Lead Organization -- Please identify the lead organization, agency, entity, etc. responsible for this project. Please identify key partners responsible for assisting in the delivery or implementation of the project.	City of Centralia. The Chehalis Tribe is a partner with the City on the Phase 1 project and we anticipate they will continue to support the City for Phase 2 construction.

Part II Description, Timing and Cost	
6. Project Description -- Please describe the project, what is intended to be accomplished, the benefits to be accrued, and to whom.	Centralia has received funds to complete hydraulic modeling, design, permitting and baseline fish monitoring as part of the second phase of the China Creek Flood and Habitat Mitigation Project. Phase 1 has been funded and is moving towards construction in 2017. We are waiting for final permits from the US Army Corps of Engineers. Phase 1 is upstream of Phase 2. Both Phase 1 and 2 will provide for short term storage of high flows. Delaying the peak flow runoff from the upper basin (approximately 70% of the watershed, generating 40% of the runoff flow) will allow China Creek to transport runoff from the urbanized middle basin (approximately 15% of the watershed, generating 50% of runoff flow), reducing the frequency and/or intensity of flooding in downtown Centralia. The benefits of the project include reduced/eliminated flooding of downtown businesses, preserving access along main travel corridors for emergency vehicles and the public, improved emergency



	response time during flood events and new/improved fish habitat. Phase 2 will multiply the flood reduction and habitat restoration completed in Phase 1.
7. Project Timeline -- Please describe the overall timeline for completion of the project as well any interim stages or phases.	Hydraulic modeling and design: January 2017; Cultural Resources Assessment: January 2017; SEPA: January - February 2017; JARPA and permitting: March - December 2017; Preparation of bid documents: January 2018; Bid project January: 2018; Bid award: April 2018; Construction: May – October 2018.
8. Project Cost and Funding -- What is the cost of this project? What are the on-going maintenance and operation requirements and costs? Is it clear who will be responsible for covering on-going maintenance and operation costs?	The estimated cost of construction is \$2.5 million. Maintenance and operation will be the responsibility of the City of Centralia. The project is being designed to mimic natural conditions so maintenance and operation should be minimal, primarily consisting of keeping the fish passage clear.
9. Other Funding -- Please explain the extent to which other funding sources or funding partners are available.	A private citizen donated the property valued at approximately \$1 million to the City for this project.

Part III (**) Completion and Doability by June 30, 2019	
10. Project Completion -- Does the funding requested complete (or substantially complete) a project that has already been started? If so, please explain.	Yes. Centralia has received funds to complete hydraulic modeling, design, permitting and baseline fish monitoring for this project. The City has already paid for wetland study.
11. Project Doable -- Can this project or the stage/phase for which funding is sought be completed by June 30, 2019? Please describe any circumstances with potential to impact the project's doability or timeline (e.g., permitting or regulatory unknowns, lack of availability of other cost-share funding resources, etc.). Please describe any advance coordination or vetting with agencies, tribes, other entities, etc. and the outcomes of that effort.	The biggest challenge for these projects so far has been obtaining permits from the US Army Corps of Engineers. The proposed schedule allows 10 month for corps permits before going to bid in January 2018. If necessary bids could be delayed for a month or two until permits are received and we could still complete the project in 2018.
12. Project Impacts -- Please identify how any project impacts will be mitigated, funded and if that mitigation will be accomplished by June 30, 2019?	This project is being designed to provide a net benefit to both fish and water quality as well as reduction of flooding in Centralia. Restoring China Creek to approximately its original meandering channel in Phase 1 along with restoration of fish friendly channel characteristics and



	<p>improving/adding off-channel rearing habitat will benefit fish and water quality. Riparian planting will eventually grow to mature size stabilizing the banks, providing shade to cool the water and providing a source of nutrients for the aquatic ecosystem.</p> <p>There will be no permanent negative impacts to water quality or fish habitat from this project. All work will be done under conditions specified in the applicable permits.</p>
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Part IV (**) Benefits Stated and Quantified	
<p>13. Emergency Response Benefits -- Please describe (and quantify) how this project enhances emergency response in a flood emergency (e.g., does it keep critical access roads and transportation facilities open and functional, does it enable easy movement of cattle, equipment and farm chemicals out of harm's way, etc.).</p>	<p>This is the second phase of a project that will reduce flooding in downtown Centralia. China Creek flooding closes several main emergency travel routes in downtown Centralia including Main Street, Pearl Street and Tower Avenue, Maple Street, Silver Street, Iron Street and Rock Street.</p>
<p>14. Essential Infrastructure Protection Benefits -- Please describe (and quantify) how this project protects essential infrastructure and the risks or consequences of not acting this funding cycle.</p>	<p>This project will help protect transportation infrastructure along China Creek listed above. Reducing the frequency and magnitude of flooding will reduce the scouring risk to the 20 bridges crossing China Creek through downtown Centralia. It will also help protect the recently restored stream section on the Centralia College campus.</p> <p>China Creek floods about once every 3 years so not acting during this funding cycle will result in at least one flooding event affecting Centralia. The magnitude of that event is impossible to predict.</p>
<p>15. Public Health, Safety and Welfare Benefits -- Please describe (and quantify) how this project protects public health, safety and welfare.</p>	<p>Public health, safety and welfare depend upon access. By preventing or reducing flooding on main traffic corridors emergency response vehicles will have access, or quicker access, to residents and areas of town needing assistance.</p>
<p>16. Residential, Commercial and/or Agricultural Protection Benefits -- Please describe (and quantify) how this project protects residential, commercial and/or agricultural interests and communities and the benefits of acting (or consequences of not acting) this funding cycle.</p>	<p>China Creek flooding has direct and indirect impacts in the community. Direct impacts include flooding of businesses and homes adjacent to the creek channel. Indirect impacts include loss of business revenue, disruption of travel and disruption of emergency services during the times streets are impassible. China Creek</p>

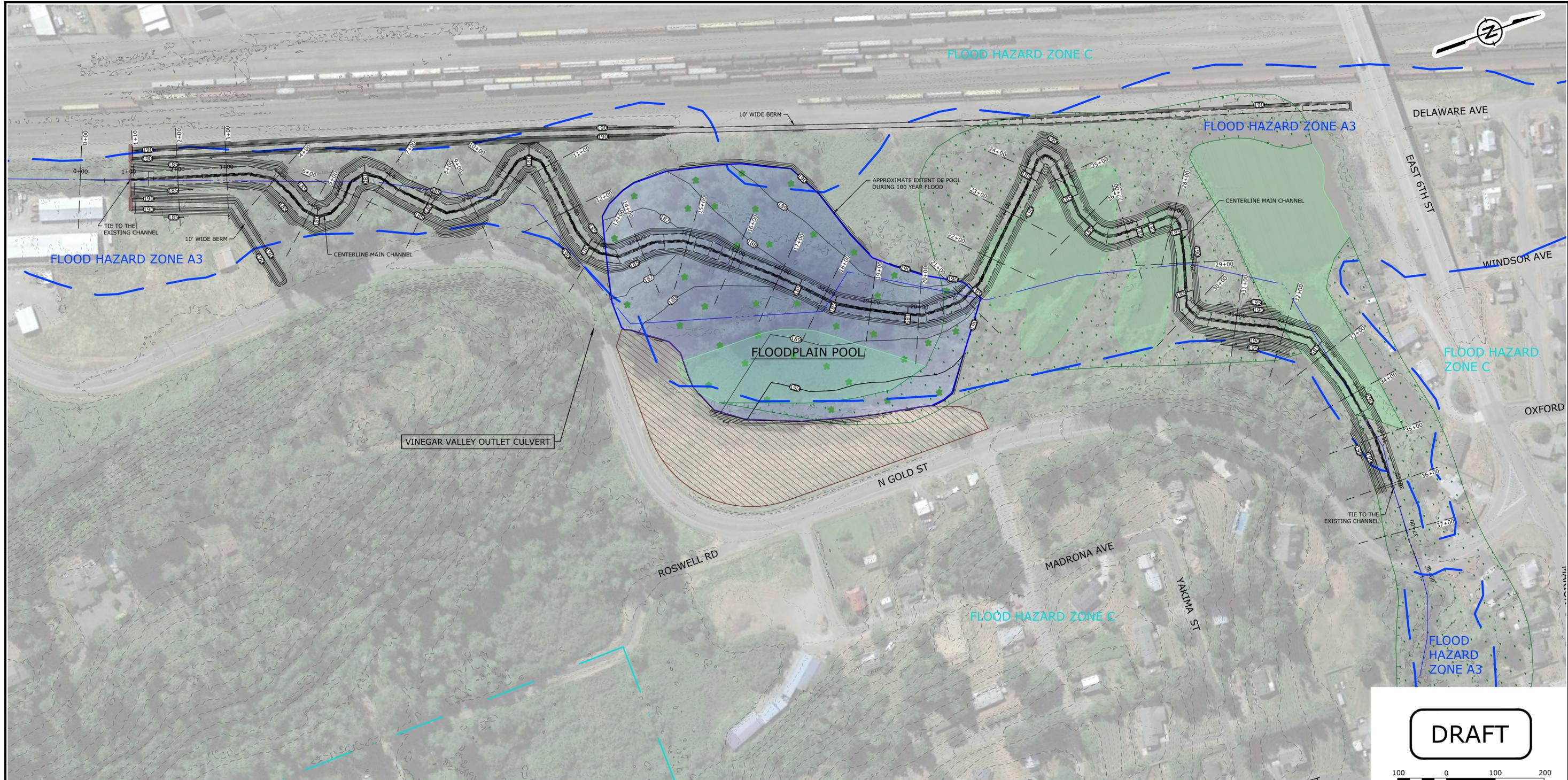


<p>Consider factors like number of structures at risk, number of people at risk, historic frequency of flood damage, magnitude of benefit to be gained for the cost, etc.).</p>	<p>flooding has historically been observed when 2.5 inches of rain falls during a 24-hour period. This occurs at a frequency of once every 3.5 years. Phase 2 of the project will reduce the magnitude of flooding and the frequency of medium floods that occur once every 25 years, and depending upon final design modeling results could show mitigation or protection during 100 year flood events.</p>
<p>17. Other Project Impacts -- Please explain how this project impacts or is potentially impacted by another project.</p>	<p>Although this project is not designed to prevent flooding when the Chehalis River floods and flows under Interstate 5 into the lower China Creek basin, when completed this project will reduce the flow from China Creek that contributes to that flooding.</p>
<p>18. Anything Else -- Please feel free to offer any additional information (e.g., photos, maps, video, drawings, etc.) that would help to better understand the scope, timing and benefits of this project.</p>	<p>See attached Phase 2 design concept and location map.</p>



Appendix A

Process/Schedule (current as of 7-22-2017)	
July 21, 2016 (FA In-Person Mtg.)	<ul style="list-style-type: none"> • Post and distribute local projects recruitment request on 7/22/2016 following Flood Authority review/discussion at their 7/21/2016 meeting. • Allow three weeks for project proposals/submittals (i.e., due no later than 5:00 p.m., Friday, August 12, 2016).
August 18, 2016 (FA Conf. Call Mtg.)	<ul style="list-style-type: none"> • Receive proposals/submittals. • Update Flood Authority at their 8/18/2016 meeting on number received, type of projects received, distribution, etc.
September 15, 2016 (FA In-Person Mtg.)	<ul style="list-style-type: none"> • Update Flood Authority at their 9/15/2016 meeting on status of Projects Committee's effort to review, rank, discuss with Tribes, discuss with agencies, preliminarily sort and rank, etc.
October 20, 2016 (FA In-Person Mtg.)	<ul style="list-style-type: none"> • Review/discuss DRAFT ranked and prioritized list with Flood Authority at their 10/20/2016 meeting.
November 17, 2016 (FA Conf. Call Mtg.)	<ul style="list-style-type: none"> • Seek Flood Authority approval of FINAL ranked and prioritized list at their 11/17/2016 Flood Authority meeting.



NOTES:

1. USE WILLOW, DOGWOOD, COTTON-WOOD, SALMON-BERRY AND PINE BARK TREES IN RIPARIAN BUFFER.
2. USE RUSHES, SEDGES, FERNS AND LEGUMES IN HERBACEOUS PLANT ZONE.
3. "THE CITY WILL EQUIP VINEGAR VALLEY / ROSWELL ROAD CULVERT WITH A FLAP GATE OPEN TOWARDS CHINA CREEK (AND PREVENTING BACKFLOW)".
4. THE WESTERN TOE OF THE BERM FOLLOWS THE BNNR PROPERTY LINE.

LEGEND

- - - 195 - - - LIDAR ELEVATION CONTOUR (MAJOR)
- - - 194 - - - LIDAR ELEVATION CONTOUR (MINOR)
- 185 — PROPOSED ELEVATION CONTOUR (MAJOR)
- 183 — PROPOSED ELEVATION CONTOUR (MINOR)
- - - - - APPROXIMATE BOTTOM OF BANK
- — — — — WETLANDS (FRESHWATER FORESTED/SHRUB)
- — — — — WETLANDS (FRESHWATER POND)
- — — — — RIPARIAN VEGETATION
- - - - - EXISTING CHANNEL
- — — — — FEMA ZONE LIMITS
- — — — — 100-YEAR FLOOD BOUNDARY

SOURCES:

1. AERIAL IMAGERY: Google Earth Pro®, Imagery Date 7/16/2014.
2. EXISTING TOPOGRAPHY: LIDAR DATA COLLECTED BY WATERSHED SCIENCES, INC. WHO CREATED THIS DATA SET FOR THE PUGET SOUND LIDAR CONSORTIUM. DATA SET: 2009 PUGET SOUND LIDAR CONSORTIUM PSLC TOPOGRAPHIC LIDAR LEWIS COUNTY WASHINGTON. THIS DATA IS ASSEMBLED INTO 7.5-MINUTE USGS QUADRANGLES AND FURTHER BROKEN DOWN TO 3.75-MINUTE QUARTER QUADS.
3. WETLAND BOUNDARY: OBTAINED FROM THE U.S. FISH AND WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY WETLANDS MAPPER WEB SITE. CHINA CREEK WETLANDS, DATED DEC. 3, 2014.
4. FEMA FLOODPLAIN DESIGNATIONS: FIRM FLOOD INSURANCE RATE MAP, CITY OF CENTRALIA, WASHINGTON, LEWIS COUNTY, PANEL 1 OF 2, COMMUNITY PANEL NUMBER 530103 0001 B, EFFECTIVE DATE: JUNE 1, 1982. FIRM FLOOD INSURANCE RATE MAP, CITY OF CENTRALIA, WASHINGTON, LEWIS COUNTY, PANEL 2 OF 2, COMMUNITY PANEL NUMBER 530103 0002 B, EFFECTIVE DATE: JUNE 1, 1982.

DRAFT

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SCALE IN FEET

REV.	DATE	DR.	CH.	REVISION

PRELIMINARY PLANS
OVERALL GRADING PLAN

CHINA CREEK RESTORATION PROJECT
AGNEW MILL PONDS
LEWIS COUNTY, WASHINGTON



PREPARED BY: FK/GR	DATE: 11/23/2015	DRAWING
DRAFTED BY: BSC	SCALE: 1" = 100'	8
APPROVED BY: FK	PROJECT: 3034761D	

BC:\BORDERE 11/23/15 P:\3034761 CHINA CREEK\PHASE 2\DESIGN < GRD_XSECT_CHINA CREEK_3034761 >